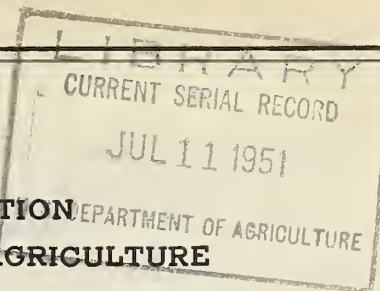


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FARM CREDIT ADMINISTRATION
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D. C.

FROZEN FOOD LOCKER PLANTS

LOCATION, CAPACITY, RATES, AND USE
JANUARY 1, 1950

By
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and
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A study conducted with funds provided
by the Research and Marketing Act.

COOPERATIVE RESEARCH AND SERVICE DIVISION
IN COOPERATION WITH THE
BUREAU OF AGRICULTURAL ECONOMICS

UNITED STATES DEPARTMENT OF AGRICULTURE
FARM CREDIT ADMINISTRATION
WASHINGTON 25, D. C.

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FOREWORD

The frozen food locker industry, especially during the past decade, has been most important in improving the processing and storage of locally grown perishable foods. The 11,600 locker plants, operating in mid-1950, widely dispersed throughout the United States, are largely located in towns of 5,000 people or less. These plants have an estimated 80 million cubic feet of gross zero space, which is equivalent to nearly one-half of all commercial sharp freezer storage in the country. Space is provided for approximately 5.7 million lockers. During 1949, the industry processed about 1-1/3 billion pounds of perishable food for some 16 million people, or more than 10 percent of our population. It is believed that with a minimum of change in present plant facilities, the volume of processing could be nearly doubled. The locker industry represents an investment of from 325 to 350 million dollars, and employs between 30,000 and 35,000 persons.

This survey, made at the request of the National Frozen Food Locker Association, an organization of locker operators, was conducted by the Farm Credit Administration in cooperation with the Bureau of Agricultural Economics, with funds provided under the Research and Marketing Act. It is closely in line with recommendations of the RMA Cold Storage Committee. The study, conducted in the early part of 1950, deals with location, capacity, patronage, services, volume, and rates and charges in locker plants, and furnishes information as to the importance of low temperature home cabinets in relation to locker plant operations.

The locker industry is in a position to render valuable service in a war emergency due to its wide dispersion of processing facilities and storage stocks, in minimizing demand on overburdened transportation facilities, in saving critical packaging materials, in utilizing available small town labor, in conserving and storing home-grown perishable food, and in serving as sub-distributors of commercial frozen foods.

SUMMARY

Since the frozen food locker survey of 1946 by the Farm Credit Administration, the number of locker plants has increased from 7,000 on January 1, 1946, to 11,442 on January 1, 1950, and 11,596 on July 1, 1950.

Estimates based on this survey show that these 11,442 plants were serving approximately 3.9 million locker patrons and about 440 thousand home unit owners not renting lockers. These plants had an estimated combined capacity of over 5.6 million lockers and processed about 1.3 billion pounds of food during 1949, of which 94 percent was meat, game, and poultry.

Although two-thirds of the plants are in the North Central and Pacific regions, the locker plant movement has expanded rather generally throughout the entire country.

Average plant capacity - the number of lockers a plant can install - showed a slight drop to 493 lockers per plant in 1950, compared with 500 in 1946, but was substantially larger than the average of 328 reported in 1941. Plants located in the South and North Atlantic regions averaged the largest, and those in the North Central the smallest.

Percentage of capacity rented averaged 78 percent on January 1, 1950, compared with 93 percent in 1946. Percentage of installed lockers rented averaged 84 percent in 1950, compared with 99 percent in 1946.

Compared with the 1946 survey, plants affiliated with retail stores increased from 35 to 40 percent; those affiliated with ice and cold storage plants declined from 16 to 9 percent; with dairy plants, from 10 to 6 percent; and with miscellaneous enterprises, from 10 to 9 percent. Non-affiliated plants increased from 29 to 36 percent.

The number of patrons per plant declined 17 percent dropping from 414 on January 1, 1946, to 343 on January 1, 1950.

The proportion of lockers rented by farmers declined from 73 percent in 1946 to 66 percent in 1950, the lowest proportion in 10 years. Farm patronage was highest in the North Central region, 75 percent, and lowest in the Pacific region, 50 percent. Farm patronage was highest in towns of 5,000 population or less, 76 percent, and lowest in cities over 25,000, 38 percent.

Eighty-nine percent of the 6,737 plants reporting in 1950 performed chilling, cutting, wrapping, and freezing services, compared with 87 percent in 1946. Pork curing was reported by 57 percent of all plants in 1950, compared with 42 percent in 1946. Forty-one percent of all plants reporting in 1950 rendered lard, compared with 26 percent in 1946. Forty-nine percent of all plants provided slaughtering service at the plant, on the farm, or elsewhere, compared with 37 percent in 1946. Twenty-seven percent slaughtered at the plant, compared with 22 percent in 1946. Twenty-two percent of all plants provided poultry dressing, compared with 17 percent in 1946.

In recent years, many locker plants have expanded their services beyond their normal locker plant operations into commercial activities.

Twenty-three percent of all plants slaughtered livestock on a custom basis for non-locker patrons, and 22 percent for resale.

Of plants with slaughter facilities, 83 percent provided custom slaughtering, and 59 percent slaughtered livestock for resale. Seventeen percent of all plants dressed poultry for non-locker patrons, and 15 percent of them processed poultry for resale. Of those plants with poultry-dressing facilities, 78 percent custom-dressed poultry for non-locker patrons, and 72 percent killed and processed poultry for resale. Twenty-four percent of all plants reporting produced cured meats for sale. Twenty-seven percent of all plants manufactured and sold pork sausage. Fifty-one percent sold commercial frozen foods. Forty-three percent of all plants sold at wholesale beef and pork processed by packers.

Rates charged for processing and storage continued to increase, compared with former years. The average annual locker rental rate reported on January 1, 1950, was \$12.97, compared with \$11.38 on January 1, 1946.

Processing rates in 1950 also showed a substantial increase over 1946. Average charge for chilling, cutting, wrapping, and freezing was \$2.86 per 100 pounds for meat on January 1, 1950, compared with \$2.01 on January 1, 1946. In plants where processing charges included grinding, rates averaged \$3.27 per 100 pounds, compared with \$2.37 in 1946. Curing rates averaged \$3.72 per 100 pounds, compared with \$3.41 in 1946. Smoking rates averaged \$2.14, or only 7 cents above 1946 rates.

Volume of products processed per locker rented by plants reporting for the year 1949 was the lowest for any year since 1941. It averaged 295 pounds, compared with 353 pounds for 1945. Total volume of food processed in all plants, estimated at 1.3 billion pounds, compared with 1.1 billion pounds in 1946. Of the total, 87 percent consisted of meat, 4 percent poultry, 3 percent game, and 6 percent fruit and vegetables. Pork cured averaged 55 pounds per locker rented, compared with 65 pounds in 1945. Animals slaughtered at plants averaged 683 head per plant, or an estimated total of 2.1 million.

The increased use of home units is an important change which is affecting locker plant operation. On January 1, 1950, trade sources estimated 2 million in use, and an estimated additional 800,000 were sold during 1950. In 1945, an estimated 165,000 home cabinets were in use.

The survey showed that an average of 77 home unit users were serviced per plant, one-half of whom did not rent lockers. Of total meat processed per plant, 14 percent was for non-locker-renting home unit owners. Eighteen percent sold home units and one percent rented them.

In the present defense emergency the locker industry, widely distributed throughout the country, can render valuable service in conserving, processing, and storing home-grown food for local consumption, in reducing demand on transportation facilities, in saving critical packaging materials, and in utilizing available small-town labor.

FROZEN FOOD LOCKER PLANTS

LOCATION, CAPACITY, RATES, AND USE

January 1, 1950

By

L. B. Mann and Paul C. Wilkins

Agricultural Economists

The use of frozen food locker plants for processing and storing foods by both farm and urban families has shown a rapid increase. Since July 1, 1938, the number of plants has increased from 1,269 to 11,442 on January 1, 1950.¹ Almost half the plants were built since the end of World War II. Figure 1 illustrates the growth, by years, for this period. Figure 2 shows the wide distribution of plants, with heaviest concentration in the North Central and Pacific regions.

The rapid expansion which started in 1940 was held back during World War II, but increased rapidly from mid-1945 to 1948. Since that date, growth slowed down due to extremely high construction costs, increased competition, and reduced demand.

The 1950 survey was made by mail questionnaire with successive mailings to nonrespondents. Questionnaires and a letter of explanation were mailed out to all locker plants in late January 1950. A postal card reminder requesting the questionnaire, if it had been completed, was sent to all names on the list 10 days after the original mailing. About 4 weeks after the original mailing, an additional questionnaire and a reminder note were sent to all plants that had not returned their questionnaires. Usable questionnaires returned totalled 6,737 or 58.9 percent of the estimated number of plants in operation. About half of the questionnaires returned were in response to the original request. The postal card reminder brought in about a fourth of the usable questionnaires and the reminder note and schedule also obtained about a fourth of the total usable responses. Numerous tests were made of replies to a number of questions to determine the extent of bias in the replies from the three different mailings. Analysis of the replies from the three mailings failed to show any appreciable amount of bias.

It was estimated that there were 11,442 plants in operation at the time of the survey. About 3.1 million installed lockers were represented in the survey.

¹On July 1, 1950, the number of plants in operation was reported to be 11,596 by K. F. Warner of the Extension Service.

NOTE: Substantial assistance was rendered by Emerson M. Brooks, Charles F. Sarle, and Catherine Senf of the Bureau of Agricultural Economics in planning the survey, preparing the questionnaire, formulating the coding and tabulating procedures, and in testing replies for bias.

The authors express their appreciation to the locker operators for cooperation in filling out questionnaires and to Etta C. Emmons, Jane H. Click, and Ruth R. Phillips of the Cooperative Research and Service Division of the Farm Credit Administration for their assistance in coding and compiling the statistical data.

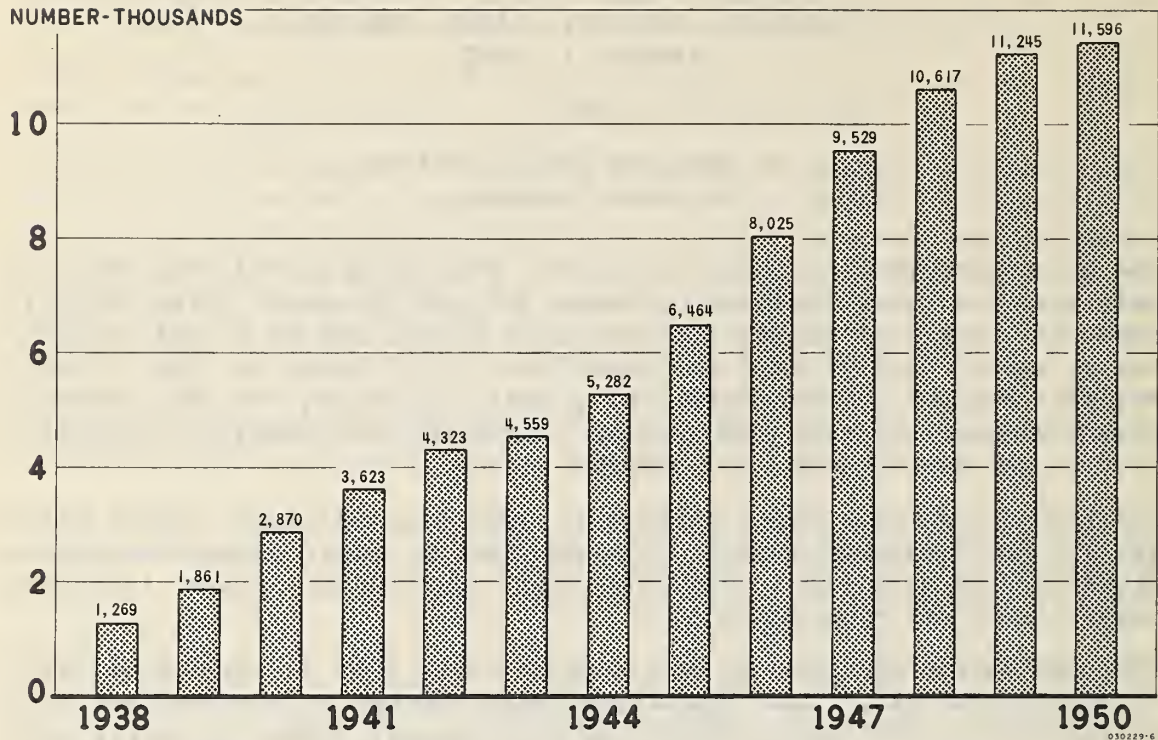


Figure 1. - Frozen Food Locker Plants in the United States July 1, 1938 to July 1, 1950.

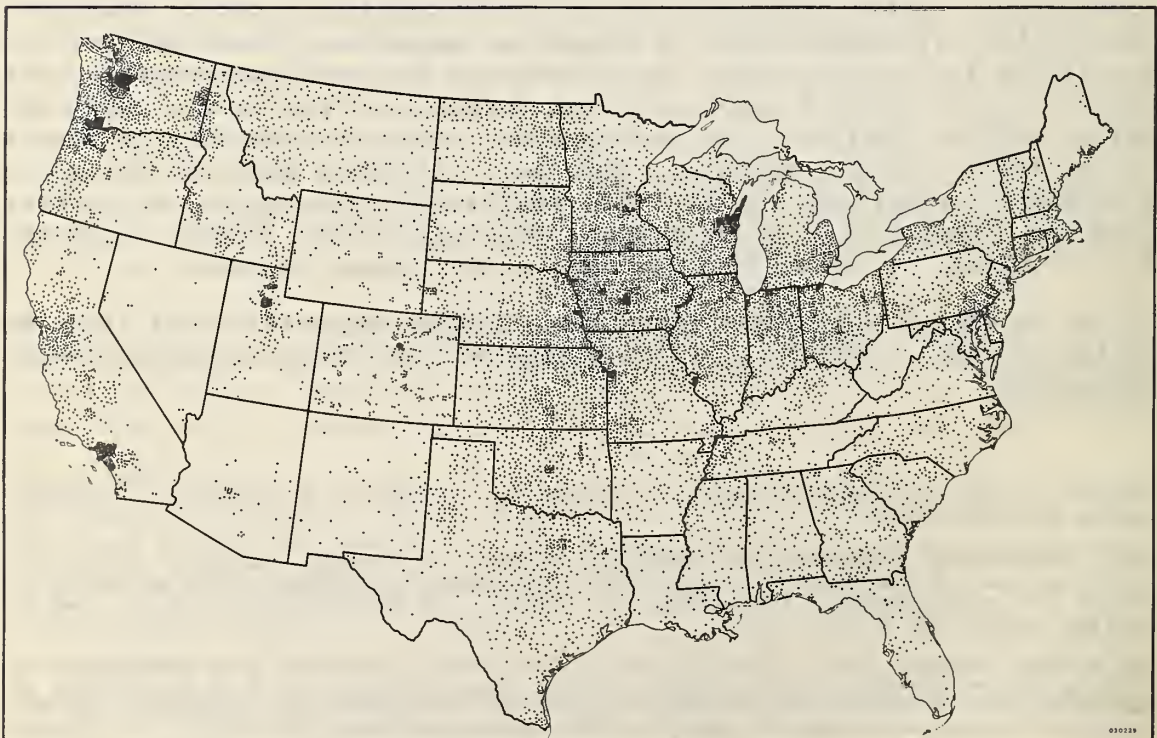


Figure 2. - Frozen Food Locker Plants Operating January 1, 1950.

CAPACITY AND USE OF LOCKER PLANTS

Table 1 shows the estimated number of locker plants, number of plants reporting, average locker capacity, average number of lockers installed, and the rental situation by States and regions on January 1, 1950.

LOCKER CAPACITY OF PLANTS

The average size, or capacity of frozen food locker plants, which increased from 328 lockers per plant in 1941 to 500 in 1946, showed a slight decline to 493 per plant in 1950. In general, plants located in the Pacific and in the South Atlantic regions were the largest while the smallest plants were located in the North Central region. The phrase "locker capacity of plants" describes the size of plants in terms of locker units, based on the total number of lockers that can be installed in existing low temperature rooms, whether or not lockers are actually installed.

Total capacity of the 11,442 locker plants on January 1, 1950, was estimated at 5,640,000 lockers, compared with 3,500,000 lockers in the 7,000 plants operating at the beginning of 1946.

LOCKERS INSTALLED

Lockers installed averaged 459 lockers per plant for the 6,579 plants reporting, compared with 470 lockers per plant in 1946. If we assume that 459 lockers is the average number installed for all locker plants in the United States, there were an estimated 5,250,000 lockers on January 1, 1950. Of the total zero space available in locker plants, 93 percent was devoted to lockers and 7 percent to other uses, approximately the same proportion as in 1946. In 1943, however, the proportion of space devoted to lockers was 89 percent, and in 1941 only 77 percent. In these earlier years much of the space not occupied by lockers was unused, while in recent years much of the space not used for lockers has been used for bulk storage.

LOCKERS RENTED

The number of lockers rented on January 1, 1950, averaged 387 per plant, compared with 464 on January 1, 1946. On the basis of average number of lockers rented per plant at the beginning of 1950, the estimated 11,442 plants in the United States had 4,428,000 lockers rented. The North Atlantic and South Atlantic regions reported the highest average number of lockers rented per plant and the North Central region the smallest.

In the next section, lockers rented are compared with total locker capacity to indicate the extent to which space is being utilized. For the years 1946 and 1950, a comparison of lockers rented with lockers installed is also presented.

PERCENTAGE OF CAPACITY RENTED

Column 6 of table 1 shows lockers rented as a percentage of locker capacity of plants. In this comparison, the percentage of lockers

Table 1. - *Estimated number of frozen food locker plants, number reporting, average locker capacity, lockers installed, lockers rented, and percentage of lockers rented of locker capacity and lockers installed, by States and regions, January 1, 1950*

State and region	Estimated number of plants	Plants reporting	Average locker capacity	Average lockers installed	Average lockers rented	Percentage lockers rented of	
						Locker capacity	Lockers installed
Maine-----	18	16	474	383	279	59	73
New Hampshire-----	27	22	549	478	399	73	83
Vermont-----	49	28	382	358	321	84	90
Massachusetts-----	45	24	529	496	378	71	76
Rhode Island-----	6	3	(1)	(1)	(1)	(1)	(1)
Connecticut-----	60	47	315	289	223	71	77
New York-----	245	173	529	479	404	76	84
New Jersey-----	60	40	667	592	474	71	80
Pennsylvania-----	261	178	672	605	529	79	87
North Atlantic--	771	531	559	504	425	76	84
Ohio-----	424	254	653	616	505	77	82
Indiana-----	358	190	604	564	472	78	84
Michigan-----	378	252	505	468	370	73	79
Wisconsin-----	678	437	369	342	299	81	87
Illinois-----	594	336	532	505	422	79	84
Minnesota-----	679	391	388	365	324	84	89
Iowa-----	890	436	391	367	329	84	90
Missouri-----	471	271	485	448	388	80	87
North Dakota-----	292	138	344	325	290	84	89
South Dakota-----	305	177	340	310	282	83	91
Nebraska-----	506	303	390	370	333	85	90
Kansas-----	496	258	495	472	408	82	86
North Central--	6,071	3,443	451	423	365	81	86
Maryland-----	43	32	738	676	585	79	87
Delaware-----	14	7	(1)	(1)	(1)	(1)	(1)
Virginia-----	76	53	659	569	485	74	85
West Virginia-----	22	21	739	529	383	52	72
North Carolina-----	106	63	660	594	537	81	90
South Carolina-----	56	33	528	504	428	81	85
Georgia-----	171	79	478	430	329	69	77
Florida-----	52	24	407	343	251	62	73
South Atlantic--	540	312	571	506	421	74	83

Table 1. - *Estimated number of frozen food locker plants, number reporting, average locker capacity, lockers installed, lockers rented, and percentage of lockers rented of locker capacity and lockers installed, by States and regions, January 1, 1950 - Continued*

State and region	Estimated number of plants	Plants reporting	Average locker capacity	Average lockers installed	Average lockers rented	Percentage lockers rented of	
						Locker capacity	Lockers installed
Kentucky-----	117	80	498	450	395	79	88
Tennessee-----	124	64	425	379	326	77	86
Alabama-----	83	35	550	478	366	67	77
Mississippi-----	94	38	415	369	306	74	83
Arkansas-----	116	65	446	420	353	79	84
Louisiana-----	46	24	477	419	320	67	76
Oklahoma-----	286	146	510	480	408	80	85
Texas-----	534	236	559	522	438	78	84
South Central--	1,400	688	510	470	394	77	84
Montana-----	228	132	351	326	294	84	90
Idaho-----	195	87	493	460	392	80	85
Wyoming-----	84	52	497	432	399	80	92
Colorado-----	229	134	583	537	474	81	88
Utah-----	154	88	569	536	465	82	87
Nevada-----	11	6	(1)	(1)	(1)	(1)	(1)
New Mexico-----	49	30	480	429	353	74	82
Arizona-----	34	24	420	375	279	66	74
Mountain-----	984	553	488	451	394	81	87
Washington-----	668	464	512	499	416	81	83
Oregon-----	482	279	533	510	432	81	85
California-----	526	309	717	639	440	61	69
Pacific-----	1,676	1,052	582	546	428	74	78
United States--	11,442	6,579	493	459	387	78	84

¹Insufficient data.

rented is based on capacity of the plants rather than on number of lockers installed, as is shown in column 7 of the table. Formerly, plants had space for considerably more lockers than were actually installed. The space not occupied could have been filled with lockers had there been sufficient demand, or it could have been used for bulk zero storage. In most plants, however, little use was made of this space. At the present time, many locker plants utilize this space for commercial bulk storage. For that reason, a comparison of lockers rented with total capacity may not be a clear indication of unused space as was the case in earlier years. Nevertheless, there appears to be sufficient evidence that the space not occupied by lockers was not being fully utilized by many locker plants at the time of the survey, and a comparison with previous years is significant.

On January 1, 1950, the survey indicates that only 78 percent of total locker capacity was rented for locker storage, compared with 93 percent in 1946, 89 percent in 1943, and 64 percent in 1941. The Mountain and North Central regions reported the highest percent of lockers rented to total capacity, while the Pacific region showed the lowest.

Because many plants today use some zero space for "bulk storage" a comparison of lockers rented with those installed furnishes a more accurate picture of the rental situation. Eighty-four percent of lockers installed were rented on January 1, 1950, compared with 99 percent on January 1, 1946. While earlier surveys did not include comparable data, this year's percentage of lockers rented is believed the lowest since 1941.

The Mountain and North Central regions reported the highest ratio of lockers rented to lockers installed, 87 and 86 percent, while the Pacific regions, at 78 percent, had the lowest. This low percentage in the Pacific region, due in part to the heavy concentration of plants in large cities, results in an excess supply of lockers for city and suburban patrons in that region.

VOLUME OF BULK STORAGE SPACE

Thirty percent of the 6,737 plants reporting indicated bulk storage space available in addition to that used for lockers. If 30 percent of all locker plants provided bulk storage, this would mean that 3,448 plants had available nearly 5,600,000 cubic feet of gross bulk storage, or an average of about 1,600 cubic feet per plant (table 2). This estimate is based on the volume of bulk storage space reported by plants in terms of the number of extra lockers which could be installed. This number of extra lockers was multiplied by 14 cubic feet; the estimated space normally required to install one locker, plus space for aisles and coils. This bulk storage is equivalent to the space needed for about 400,000 additional lockers. The use of bulk storage is rather flexible, compared with the use of lockers and, when properly operated, the turnover may be rapid, resulting in increased returns.

Table 2. - *Estimated number of frozen food locker plants with bulk storage and estimated volume of bulk zero storage space available, by regions, January 1, 1950*

Region	Estimated number of plants	Plants with zero bulk storage		Estimated cubic feet of bulk zero storage space
		Number	Percent	
North Atlantic-----	771	274	36	610,000
North Central-----	6,071	1,785	29	2,374,000
South Atlantic-----	540	225	42	526,000
South Central-----	1,400	449	32	754,000
Mountain-----	984	343	35	524,000
Pacific-----	1,676	372	22	802,000
United States-----	11,442	3,448	30	5,590,000

The largest number of plants and greatest amount of bulk zero storage space were in the North Central region. The South Atlantic region, however, had the highest percentage of plants with bulk storage space, while the Pacific plants reported the lowest percentage.

Of the plants reporting bulk storage, 46 percent averaged less than 1,000 cubic feet of bulk storage, 49 percent from 1,000 to 5,000 cubic feet, and only 5 percent reported over 5,000 cubic feet (table 3). The South and North Atlantic regions reported the highest percentage of plants averaging over 1,000 cubic feet, while the North Central region reported the highest percentage of plants averaging under 1,000 cubic feet.

Table 3. - *Estimated number of plants with bulk zero storage and percentage of plants with specified amounts of bulk storage, by regions, January 1, 1950*

Region	Estimated plants	Cu. ft. of bulk zero storage space		
		Under 1,000	1,001 5,000	Over 5,000
	Number	Percent	Percent	Percent
North Atlantic-----	274	31	57	12
North Central-----	1,785	52	46	2
South Atlantic-----	225	23	69	8
South Central-----	449	44	48	8
Mountain-----	343	50	45	5
Pacific-----	372	39	52	9
United States-----	3,448	46	49	5

Table 4. - Frozen food locker plants reporting and percentage of plants having indicated size of locker as most numerous, by States and regions, January 1, 1950

State and region	Plants reporting	Size of locker			
		5-6 cu. ft.	7 cu. ft.	8 cu. ft.	9 cu. ft. and over
		Percent	Percent	Percent	Percent
Maine-----	16	75	6	19	-
New Hampshire-----	22	77	-	23	-
Vermont-----	28	92	4	-	4
Massachusetts-----	24	79	13	4	4
Rhode Island-----	3	67	33	-	-
Connecticut-----	47	89	9	-	2
New York-----	177	80	13	3	4
New Jersey-----	40	90	2	5	3
Pennsylvania-----	181	82	12	3	3
North Atlantic--	538	83	10	4	3
Ohio-----	257	85	8	5	2
Indiana-----	195	89	7	2	2
Michigan-----	258	82	6	5	7
Wisconsin-----	446	75	14	6	5
Illinois-----	339	87	8	3	2
Minnesota-----	404	70	13	11	6
Iowa-----	447	78	11	7	4
Missouri-----	280	80	12	5	3
North Dakota-----	146	63	15	14	8
South Dakota-----	180	70	15	11	4
Nebraska-----	308	68	16	9	7
Kansas-----	262	73	13	7	7
North Central---	3,522	77	11	7	5
Maryland-----	32	88	6	3	3
Delaware-----	7	71	29	-	-
Virginia-----	53	92	4	2	2
West Virginia-----	21	76	19	5	-
North Carolina-----	63	99	1	-	-
South Carolina-----	33	91	9	-	-
Georgia-----	80	91	8	1	-
Florida-----	25	91	4	5	-
South Atlantic--	314	91	7	2	(1)

Table 4. - *Frozen food locker plants reporting and percentage of plants having indicated size of locker as most numerous, by States and regions, January 1, 1950 - Continued*

State and region	Plants reporting	Size of locker			
		5-6 cu. ft.	7 cu. ft.	8 cu. ft.	9 cu. ft. and over
		<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Kentucky-----	84	79	14	5	2
Tennessee-----	65	82	7	8	3
Alabama-----	38	94	6	-	-
Mississippi-----	38	73	19	-	8
Arkansas-----	67	73	11	9	7
Louisiana-----	24	92	4	4	-
Oklahoma-----	154	75	15	8	2
Texas-----	243	75	14	5	6
South Central--	713	77	13	6	4
Montana-----	133	64	18	9	9
Idaho-----	90	37	16	12	35
Wyoming-----	52	72	10	16	2
Colorado-----	135	71	14	11	4
Utah-----	92	62	17	14	7
Nevada-----	6	100	-	-	-
New Mexico-----	32	50	27	20	3
Arizona-----	24	71	4	17	8
Mountain-----	564	61	15	12	12
Washington-----	477	11	6	45	38
Oregon-----	285	19	8	29	44
California-----	324	76	15	5	4
Pacific-----	1,086	34	9	28	29
United States--	6,737	70	11	10	9

¹Less than 0.5 percent.

SIZE OF INDIVIDUAL LOCKERS

This discussion of locker plant capacity assumes that locker capacity defines the size of the plant in terms of the number of lockers that can be installed in existing rooms of zero degree temperature. The most commonly used or "standard" locker box is one ranging between 5-1/2 and 6-1/2 cubic feet. However, larger-sized boxes are frequently used, and an attempt was made to ascertain the extent to which locker plants utilized other than so-called "standard" size.

Most locker plants have the majority of their lockers of one general size. The information secured was on the size of locker that was most numerous in each plant. For the country as a whole, 70 percent of the operators reported the standard-sized locker box as most numerous in their plants, while 11 percent reported 7 cubic feet lockers; 10 percent, 8 cubic feet; and 9 percent reported lockers of 9 or more cubic feet capacity (table 4). Many of the 7 cubic feet boxes reported probably were actually "standard" size.

A greater percentage of plants using larger-sized boxes were located in the Pacific and Mountain regions where 66 and 39 percent, respectively, were of this type. Standard-sized lockers were most generally used in the South and North Atlantic regions.

SPECIFIED LOCKER CAPACITY OF PLANTS

Table 5 shows the percentage of locker plants with specified locker capacity by regions. The survey indicated that 47 percent of all locker plants averaged from 200 to 500 lockers per plant, while 37 percent of them averaged over 500 lockers per plant. Sixteen percent of all plants

Table 5. - *Percentage of 6,579 frozen food locker plants reporting by specified locker capacity of plants, by regions, January 1, 1950*

Locker capacity	North Atlantic	North Central	South Atlantic	South Central	Mountain	Pacific	United States
Under 100-----	6	3	3	1	7	5	4
100 - 199-----	7	13	6	5	16	14	12
200 - 299-----	10	17	6	12	16	14	15
300 - 399-----	13	20	13	24	14	13	18
400 - 499-----	13	14	16	16	9	10	14
500 - 599-----	17	10	20	15	10	9	11
600 - 699-----	8	7	11	8	6	7	7
700 - 799-----	5	4	7	4	5	5	4
800 - 899-----	6	3	4	4	3	3	4
900 - 999-----	3	2	3	2	3	3	2
1,000 - 1,099--	4	2	5	3	3	4	3
1,100 - 1,199--	1	1	2	2	2	2	1
1,200 and over-	7	4	4	4	6	11	5
Total-----	100	100	100	100	100	100	100

reported less than 200 lockers per plant, while only 9 percent had over 1,000 lockers per plant.

The small plants, less than 200 lockers, were most common in the Mountain region. Medium-sized plants, from 200 to 500 lockers, were most frequent in the South Central and North Central regions, and larger plants, over 600 lockers, in the Pacific and Atlantic regions.

AFFILIATION OF PLANTS

Many frozen food locker plants are affiliated with other business enterprises. Grocery and meat markets often have locker service to meet the competition from locker plants. In other businesses, it offers a means of making more efficient use of excess refrigerated space, as in ice, cold storage, and dairy plants, while in still others it represents an attempt to attract new business to a miscellaneous group of enterprises.

TYPES OF AFFILIATION

Table 6 shows the percentage of locker plants affiliated with other business enterprises, by regions. Approximately 40 percent of all plants were affiliated with meat markets and grocery stores, 9 percent with ice and cold storage, 6 percent with dairy plants, 2 percent with farm supply companies, 7 percent with miscellaneous enterprises, and 36 percent were not affiliated with any other type of business.

Compared with former years, the most significant trend was the increase in plants not affiliated with other businesses and in plants affiliated with meat markets and grocery stores. Non-affiliated plants increased from 29 percent of all plants in 1946 to 36 percent in 1950. Plants affiliated with meat markets and grocery stores increased from 35 percent to 40 percent. On the other hand, the percent of plants affiliated with ice and cold storage, dairy, and miscellaneous enterprises declined.

Table 6. - *Percentage of 6,737 frozen food locker plants reporting that were affiliated with other business enterprises, by regions, January 1, 1950*

Affiliation	Region						United States
	North Atlantic	North Central	South Atlantic	South Central	Mountain	Pacific	
Meat market or grocery-	22	43	15	34	52	49	40
Ice and cold storage---	21	6	18	13	6	9	9
Dairy plant-----	4	8	1	1	6	5	6
Farm supply-----	2	1	2	3	1	1	2
Miscellaneous-----	11	6	8	5	8	9	7
Not affiliated-----	40	36	56	44	27	27	36

Another interesting change taking place in recent years is locker plants expanding into other lines of business. The data shows that 22 percent of all affiliated locker plants were first started as locker plants and later added other activities. For example, 23 percent of the locker plants affiliated with meat markets or grocery stores were first operated as independent locker enterprises. Likewise, 10 percent of the ice and cold storage plants, 6 percent of the dairy, 19 percent of the farm supply, and 40 percent of the miscellaneous enterprises were first operated as locker plant businesses.

CAPACITY RELATED TO AFFILIATION

The average capacity of a locker plant varies somewhat with the type of business with which it is affiliated, as shown by table 7. Plants affiliated with ice and cold storage concerns reported an average capacity of 734 lockers, or slightly less than twice the average of 372 lockers reported by plants affiliated with grocery and meat markets. Locker plants operated in conjunction with dairy plants were also relatively small, averaging 421 lockers. Next to ice and cold storage, non-affiliated plants were the largest with an average capacity of 569 lockers.

The percent of lockers rented, compared with lockers installed, varied considerably by type of affiliation. Those affiliated with farm supply and dairy enterprises reported the highest percent of lockers rented, 96 and 91 percent, respectively, of lockers installed. Those affiliated with miscellaneous businesses, meat markets, and non-affiliated types, showed the lowest percent rented, from 82 to 84 percent.

Table 7. - *Frozen food locker plants reporting, average locker capacity of plants, lockers installed, lockers rented, and percentage of lockers rented of locker capacity and lockers installed, by affiliation, January 1, 1950*

Type of affiliation	Plants reporting	Average locker capacity of plants	Average lockers installed	Average lockers rented	Percentage of lockers rented of -	
					Locker capacity	Lockers installed
Meat market or grocery-	2,671	372	347	291	78	84
Ice and cold storage---	581	734	694	588	80	85
Dairy plant-----	384	421	404	370	88	91
Farm supply-----	99	523	494	423	81	96
Miscellaneous-----	516	554	509	419	76	82
Not affiliated-----	2,328	569	523	439	77	84
Total and average-	6,579	493	459	387	78	84

Table 8. - *Average locker capacity of frozen food locker plants, by affiliation, January 1, 1940-50*

Year	Locker capacity of plants					
	Meat market or grocery	Ice and cold storage	Dairy plant	Other enterprise	Not affiliated	Average for all plants
1940-----	231	406	325	264	431	330
1941-----	255	413	313	337	406	328
1942-----	240	447	327	327	415	327
1943-----	246	527	342	343	428	347
1944 ¹ -----	283	680	395	434	482	434
1946-----	362	742	419	537	552	500
1950-----	372	734	421	549	569	493

¹Survey July 1, 1944.

Table 8 shows the changes which have taken place in average size of locker plants by type of affiliation from 1940 to 1950. All types of plants continued to increase in capacity except those affiliated with ice and cold storage plants, which showed a decline between 1946 and 1950. Non-affiliated plants reported the largest increase, while those affiliated with dairy plants showed the smallest.

PATRONAGE

The number of locker patrons averaged 343 per plant on January 1, 1950 (table 9). This represents a decline of 17 percent from the 414 patrons per plant on January 1, 1946. Estimated total number of patrons on January 1, 1950, was 3.9 million, compared with 2.9 million on January 1, 1946. Sixty-six percent of all patrons, or 226 per plant, were classified as farmers,² and 34 percent, or 117, as town or city patrons.

²The classification of patrons into farm and non-farm patrons was determined by the operators' definition of a farm patron.

Table 9. - *Frozen food locker plants reporting, average number of locker patrons per plant, and percentage of locker patrons living on farms, by regions, January 1, 1950*

Region	Plants reporting	Average number locker patrons per plant	Percentage of patrons living on farms
North Atlantic-----	473	361	59
North Central-----	3,140	320	75
South Atlantic-----	280	367	70
South Central-----	618	357	65
Mountain-----	489	355	55
Pacific-----	835	389	50
United States-----	5,835	343	66

The highest proportion of farm patronage, 75 percent, was reported by plants located in the North Central region and the lowest, 50 percent, in the Pacific region.

This year's survey indicates the lowest percent of farm patronage since 1940, when the first Farm Credit survey was conducted. During the period from 1940 to 1946, farm patrons averaged from 71 to 74 percent of total patronage.

PATRONAGE AND AFFILIATION

Table 10 shows the average number of patrons per plant classified by types of affiliated enterprises, and the percentage of patrons that are

Table 10. - *Frozen food locker plants reporting, average number of patrons per plant, and percentage of locker patrons living on farms, by affiliation and region, January 1, 1950*

Affiliated enterprise	Plants reporting	North Atlantic		North Central		South Atlantic	
		Average number of patrons	Percentage of patrons living on farms	Average number of patrons	Percentage of patrons living on farms	Average number of patrons	Percentage of patrons living on farms
Meat market or grocery	2,390	283	63	246	80	279	69
Ice and cold storage--	490	540	55	561	63	288	68
Dairy plant-----	357	302	54	298	79	167	50
Farm supply-----	93	407	71	369	79	618	71
Miscellaneous-----	458	253	55	348	67	455	64
Not affiliated-----	2,047	341	62	367	74	399	71
Total and average	5,835	361	59	320	75	367	70

Affiliated enterprise	South Central		Mountain		Pacific		United States	
	Average number of patrons	Percentage of patrons living on farms	Average number of patrons	Percentage of patrons living on farms	Average number of patrons	Percentage of patrons living on farms	Average number of patrons	Percentage of patrons living on farms
Meat market or grocery	270	67	235	54	301	49	259	69
Ice and cold storage--	444	64	869	50	563	51	529	59
Dairy plant-----	412	68	428	55	386	63	321	73
Farm supply-----	287	71	526	80	307	65	370	75
Miscellaneous-----	401	64	360	50	488	42	376	58
Not affiliated-----	395	65	444	57	459	50	387	67
Total and average	357	65	355	55	389	50	343	66

farmers. The smallest average number of patrons was reported by plants affiliated with grocery stores or meat markets, while the largest number of patrons were in plants operated by ice and cold storage companies. The table also shows that the highest proportion of farm patrons was reported by plants affiliated with farm supply and dairy plants, while the lowest was in the miscellaneous, and ice and cold storage groups.

The percentage of farm patronage of plants by affiliated enterprises also varied widely by regions. For example, meat markets or grocery stores reported 80 percent farm patrons in the North Central region and only 49 percent in the Pacific. Likewise, in non-affiliated plants the percentage of farm patronage ranged from 74 percent in the North Central to only 50 percent in the Pacific region.

POPULATION OF TOWN

Size and type of services rendered by locker plants are also influenced to a considerable extent by the size of the town in which the plants are located. Locker plant capacity is frequently related to the population of the town in which the plant is located, plus size of its trading area. Locker plant services, both number and type, are often determined by services which are already available in the community. Smaller towns usually have less adequate and less satisfactory sources of commercial food supply and fewer local processing services than larger towns. For that reason, plants located in smaller towns may have a better opportunity to provide more complete processing services.

PATRONAGE AND SIZE OF TOWN

The extent of farm patronage in a locker plant is influenced not only by the size of town in which it is located, but also by type of business affiliation. Table 11 shows the average number of locker patrons and percentage of patrons living on farms by region and size of town. As indicated, farm patrons average 66 percent of all patrons for the United States but vary from 81 percent in towns with a population of 1,000 or under to 38 percent in cities over 25,000. Analyzed on a regional basis, a similar pattern of farm patronage was shown, although the variation in farm patronage between large and small towns was less marked in some regions than in others. Farm patrons represented a higher percentage of total patrons in towns up to 10,000 in the South Atlantic and North Central regions than they did in plants located in the Pacific and Mountain regions.

Table 11. - Average number of locker patrons per plant and percentage of patrons living on farms, by region and size of town, January 1, 1950¹

Population of town	North Atlantic		North Central		South Atlantic		South Central		Mountain		Pacific		United States	
	Number patrons per plant	Per-centage farm patrons	Number patrons per plant	Per-centage farm patrons	Number patrons per plant	Per-centage farm patrons	Number patrons per plant	Per-centage farm patrons	Number patrons per plant	Per-centage farm patrons	Number patrons per plant	Per-centage farm patrons	Number patrons per plant	Per-centage farm patrons
1,000 or under-----	232	71	224	85	257	75	219	83	180	68	208	67	219	81
1,001 - 2000-----	316	68	335	81	274	75	269	78	279	66	336	61	316	76
2,001 - 5,000-----	344	61	403	77	339	75	318	71	397	64	411	61	375	71
5,001 - 10,000-----	375	59	476	73	410	75	403	68	513	58	502	58	451	67
10,001 - 25,000-----	465	56	533	61	487	68	490	61	628	52	531	45	523	57
Over 25,000-----	486	46	571	44	473	53	621	41	618	32	577	27	570	38
Average-----	361	59	320	75	367	70	357	65	355	55	389	50	343	66

¹Information based on 6,015 plants reporting.

PLANT LOCATION AND SIZE OF TOWN

Table 12 shows, by regions, the percentage of locker plants operating in towns of specified population. Seventy-two percent of all plants were operating in towns of 5,000 or less, compared with 74 percent in 1946. Forty percent were in towns of 1,000 or less, compared with 39 percent in 1946, and 19 percent in towns of over 10,000, compared with 16 percent in 1946. The North Central region reported 81 percent of plants in towns of 5,000 or less and 69 percent in towns of 2,000 or less. The North and South Atlantic regions reported only 57 percent of plants located in towns of 5,000 or less, and nearly a third in towns of 2,000 or less. In other regions, nearly two-thirds of the plants were located in towns of 5,000 or less.

Table 12. - *Percentage of 6,737 frozen food locker plants that operate in towns of specified population, by regions, January 1, 1950*

Region	Population of town						Total
	1,000 or under	1,001- 2,000	2,001- 5,000	5,001- 10,000	10,001- 25,000	Over 25,000	
North Atlantic-----	18	14	25	15	16	12	100
North Central-----	53	16	12	6	6	7	100
South Atlantic-----	14	17	26	15	14	14	100
South Central-----	15	19	29	16	11	10	100
Mountain-----	38	15	16	8	10	13	100
Pacific-----	32	13	16	9	11	19	100
United States-----	40	16	16	9	9	10	100

SIZE OF TOWN AND YEAR OF OPENING

Table 13 shows the percentage of plants opened in towns of specified population, by year of opening. The most important change that has taken place in the past 5 years is the shift in new plant construction from larger towns and cities to those of 5,000 or less. With the exception of the period prior to 1937, the highest percentage of plants in towns over 10,000 were built during the war years, 1942 to 1944, while the highest percentage of plants built in towns of 5,000 and under took place from 1946 to 1949. A few of these small plants were constructed as branches of larger plants and provided little or no processing services. Others were built by grocery and meat markets.

Table 13. - *Percentage of 6,488 frozen food locker plants in various-sized towns, by year of opening*

Year opened	Population of town						All towns
	1,000 or under	1,001-2,000	2,001-5,000	5,001-10,000	10,001-25,000	Over 25,000	
1935 and earlier-----	24	12	19	16	14	15	100
1936-----	29	25	15	4	16	11	100
1937-----	36	15	18	13	10	8	100
1938-----	40	20	19	10	5	6	100
1939-----	42	19	14	7	10	8	100
1940-----	43	14	17	9	7	10	100
1941-----	41	14	16	9	9	11	100
1942-----	37	15	17	11	8	12	100
1943-----	37	13	15	10	10	15	100
1944-----	34	18	18	11	9	10	100
1945-----	38	16	19	9	8	10	100
1946-----	40	17	18	7	9	9	100
1947-----	43	14	14	9	8	12	100
1948-----	47	14	13	10	7	9	100
1949-----	46	19	18	9	2	6	100
United States-----	40	16	16	9	9	10	100

LOCKER CAPACITY AND SIZE OF TOWN

In locating a locker plant, the problem of capacity or size of plant to serve a community is one of the most difficult to solve. No formula has yet been devised to measure accurately the potential locker needs of a town and its trading area. Table 14 is designed to show the percentage of different-sized locker plants in relation to population of towns in which plants are located. This table shows that 49 percent of all plants reporting were under 400 lockers in size, 25 percent were from 400 to 600 capacity, and 26 percent had over 600 lockers. It also shows

Table 14. - *Percentage of 6,737 frozen food locker plants of specified locker capacity operating, by size of town, January 1, 1950*

Population of town	Percentage of plants with specified locker capacity						All plants
	Under 200 lockers	200-399 lockers	400-599 lockers	600-799 lockers	800-999 lockers	1,000 lockers and over	
1,000 or under-----	26	48	20	4	1	1	100
1,001 - 2,000-----	11	36	33	13	4	3	100
2,001 - 5,000-----	9	26	31	18	8	8	100
5,001 - 10,000-----	7	19	28	20	11	15	100
10,001 - 25,000----	7	15	21	16	14	27	100
Over 25,000-----	8	13	20	15	11	33	100
Total-----	16	33	25	11	6	9	100

that in towns with a population of 1,000 or under, the capacity of 74 percent of the plants was under 400 lockers. In towns ranging from 2,000 to 5,000 population, 75 percent of the plants ranged in size from 200 to 800 lockers, with 31 percent between 400 and 600 lockers. In towns of 5,000 to 10,000, the distribution in size of plants was rather varied with a significant number of plants in all categories, ranging from 200 to 1,000 lockers per plant. Twenty-eight percent of the plants were from 400 to 600 lockers. In towns of over 10,000, the size of plants also covered a wide range in capacity, with plants of 1,000 and over and plants from 400 to 600 lockers, most common.

PROCESSING AND SLAUGHTERING SERVICES

Contrasted to the simple low temperature storage service provided by the early locker plants, the modern locker plant offers a much improved and broader service. The survey indicates that, in general, locker plants have continued to expand and diversify their services. Most plants today offer chilling, aging, cutting, grinding, wrapping, and sharp-freezing services. Many of them also provided such services as slaughtering, poultry dressing, curing, smoking, lard rendering, and fruit and vegetable processing. A smaller number also manufacture commercial type sausage and ice cream and have embarked upon a wholesale and retail merchandising program.

MEAT CHILLING, CUTTING, WRAPPING, AND FREEZING

Eighty-nine percent of the 6,737 plants reporting offered chilling, cutting, wrapping, and freezing services, compared with 87 percent in 1946, and 83 percent in 1941. With the exception of plants in the Pacific and North Atlantic regions, from 90 to 96 percent of all plants rendered this service. In these two regions, 72 and 79 percent of the plants reported this service (table 15).

Table 15. - *Frozen food locker plants reporting and percentage of plants that provide major processing services, by regions, January 1, 1950*

Region	Plants reporting	Chill, cut, wrap, and freeze	Cure	Smoke	Render lard
	Number	Percent	Percent	Percent	Percent
North Atlantic-----	538	79	50	48	21
North Central-----	3,522	92	61	59	48
South Atlantic-----	314	93	80	66	61
South Central-----	713	96	72	66	55
Mountain-----	564	90	45	43	37
Pacific-----	1,086	72	35	34	10
United States-----	6,737	89	57	55	41

Table 16. - *Frozen food locker plants reporting and percentage of plants of specified locker capacity that provide major processing services, January 1, 1950*

Plant capacity in lockers	Number of plants reporting services	Percentage of plants providing major processing services			
		Chill, cut, wrap, and freeze	Cure	Smoke	Render lard
Under 100-----	264	52	19	15	10
100 - 199-----	816	77	35	33	20
200 - 299-----	1,006	90	45	42	27
300 - 399-----	1,192	92	57	53	43
400 - 499-----	896	93	64	60	48
500 - 599-----	769	95	73	70	55
600 - 699-----	477	91	70	66	54
700 - 799-----	302	92	70	68	56
800 - 899-----	242	90	72	70	51
900 - 999-----	148	96	76	72	54
1,000 and over-----	625	91	69	68	49
Total and average-	6,737	89	57	55	41

While cutting, wrapping, and freezing services were performed by plants of all sizes, those with over 200 lockers reported the highest percentage, 92 percent, with plants under 200 lockers showing the lowest, 71 percent (table 16). With the exception of plants located in towns over 25,000, there was little difference in the percentage of plants performing cutting, wrapping, and freezing services. Plants located in towns from 1,000 to 5,000 reported the highest percentage of cutting, wrapping, and freezing facilities, 91 percent, while plants located in towns over 25,000 showed the lowest percentage, 81 percent.

CURING

Fifty-seven percent of all plants reporting provided pork curing service in the 1950 survey, compared with 42 percent in 1946, and 39 percent in 1943. The highest percentage, 80 percent, was reported by plants in the South Atlantic region, and the lowest, 35 percent, in the Pacific region (table 15).

Curing was most common in plants of 500 to 1,000 locker capacity, 72 percent, and least important in plants under 300 lockers, 38 percent.

SMOKING

Fifty-five percent of the plants reporting offered smoking service compared with 37 percent in 1946, and 34 percent in 1943 (table 15). The

South Atlantic and South Central regions reported the highest percentage, 66 percent, with the Pacific and Mountain the lowest, 34 and 43 percent. Eighty percent of the plants in the South Atlantic reported curing service but only 66 percent smoked pork. This appears to indicate that many patrons in that region prefer cured pork rather than cured and smoked pork, which is preferred in most other sections of the country. Smoking service is increasing in the South, however, as indicated by the fact that only 39 percent of the locker plants reported this service in 1946, compared with 66 percent in the 1950 survey. Smoking service was most common in plants of over 500 locker capacity and least important in plants under 300 lockers (table 16).

LARD RENDERING

Forty-one percent of all plants reporting rendered lard, compared with 26 percent in 1946 (table 15). Plants located in the South Atlantic region led with 61 percent, followed by the South Central with 55 percent. Pacific and North Atlantic regions were lowest with only 10 and 21 percent. Rendering lard is one of the most satisfactory services offered by locker plants from the standpoint of both patron and plant. Not only does it relieve the housewife of a disagreeable task at home, but it tends to utilize surplus fat most efficiently. In contrast to the retailer, who sells all he can of the surplus fat on meat cuts, the locker plant operator should be interested in trimming surplus fat before freezing for locker storage. This enables a patron to use the space saved in the locker to store other foods. Lard rendering was most common in plants of 500 to 1,000 lockers and least important in plants of under 300 lockers (table 16).

SLAUGHTERING

Table 17 shows the number and percentage of frozen food locker plants providing slaughtering service, by regions. Forty-nine percent of all plants reporting provided some type of slaughter service. Twenty-seven percent of the plants furnished slaughter service at the plant, compared

Table 17. - *Plants reporting and percentage of frozen food locker plants that provide slaughtering service, by regions, January 1, 1950*

Region	Plants reporting	Slaughter at plant	Slaughter on farm ¹	Provide outside custom slaughter service
	<i>Number</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
North Atlantic-----	538	8	1	17
North Central-----	3,522	36	5	16
South Atlantic-----	314	24	1	23
South Central-----	713	37	2	21
Mountain-----	564	18	3	22
Pacific-----	1,086	4	2	18
United States-----	6,737	27	4	18

¹Locker plant provides personnel and equipment for slaughtering.

with 22 percent in 1946, and only 19 percent in 1943. Plants offering slaughter service on the farm averaged only 4 percent in 1950, compared with 9 percent in 1946 and 20 percent in 1943. The percentage of plants that provided slaughter service elsewhere averaged 18 percent in 1950, 6 percent in 1946, and 17 percent in 1943.

Plants located in the South Central and North Central regions reported the highest percentage of slaughter plant facilities, with those in the Pacific, North Atlantic, and Mountain regions the lowest. It is estimated that 70 percent of locker plant slaughter facilities are located in the North Central States. Farm slaughter by locker plant personnel was of minor importance except in the North Central and Mountain regions. Outside custom slaughter is most common in the South Atlantic, Mountain, and South Central regions.

POULTRY SLAUGHTERING AND DRESSING

Twenty-two percent of all locker plants reporting slaughtered poultry, compared with 17 percent in 1946 (table 18). Increased interest on the part of plant operators in expanding summer and fall income has been largely responsible for this growth. The leading regions providing poultry-dressing service were the South Atlantic and South Central. Only 4 percent of the plants in the Pacific region reported poultry-dressing equipment, compared with 50 percent in the South Atlantic.

Table 18. - *Frozen food locker plants reporting and percentage of plants that operate poultry-killing facilities, by regions, January 1, 1950*

Region	Plants reporting	Percentage of plants operating poultry killing facilities
North Atlantic-----	538	16
North Central-----	3,522	22
South Atlantic-----	314	50
South Central-----	713	37
Mountain-----	564	15
Pacific-----	1,086	4
United States-----	6,737	22

COMMERCIAL OPERATIONS

In addition to what might be termed service operations, performed largely for locker patrons, an increasing number of locker plants have expanded their activities into commercial operations. The survey showed that 17 percent of all locker plants custom slaughtered poultry for non-locker patrons and 15 percent of them killed and processed poultry for resale (table 19). Plants providing the highest percentage of custom slaughtering of poultry were located in the South Atlantic and South Central regions, with those reporting the lowest percentage in the Pacific region. Of plants with poultry-dressing facilities, 78 percent custom dressed poultry for non-locker patrons and 72 percent killed and processed poultry for resale.

Twenty-three percent of all plants reported that they slaughtered livestock for non-locker patrons (table 19). This practice was most common in plants in the North Central and South Central regions, 30 and 32 percent, and least important in those in the Pacific and North Atlantic regions, 3 and 6 percent.

Twenty-two percent of all plants reported purchasing livestock for slaughter and resale. The highest percentage of plants performing this service were located in the South Central region, 33 percent, and the lowest in the Pacific region, 7 percent. Of plants with slaughter facilities, 83 percent provided a custom slaughtering service for non-locker patrons and 59 percent of these plants slaughtered livestock for resale.

Twenty-four percent of all plants reporting produced cured meats for sale with this practice most common in plants located in the South Atlantic and South Central regions, 33 percent, and least important in the Pacific region, 10 percent. Of plants with curing facilities, 42 percent processed pork for resale.

Twenty-seven percent of the plants reported the manufacture and sale of pork sausage, with the highest percentage, 40 and 44 percent, of plants performing this type of operation located in the South Atlantic and South Central regions and the lowest percent, 17 and 24 percent, in the Pacific and North Central regions.

Table 19. - *Percentage of 6,737 food locker plants reporting that were engaged in select commercial operations, by regions, January 1, 1950*

Region	Custom slaughter poultry for non-locker patrons	Kill and process poultry for sale	Custom slaughter livestock for non-locker patrons	Buy livestock for slaughter and resale	Produce cured meats for sale	Make pork sausage for sale	Make ice cream for sale	Sell commercial frozen foods	Whole-sale packer beef and pork
North Atlantic--	15	13	6	9	22	28	4	64	43
North Central---	17	16	30	25	26	24	3	51	46
South Atlantic--	44	33	20	26	33	40	3	60	38
South Central---	30	26	32	33	33	44	5	50	42
Mountain-----	9	12	14	21	18	27	2	49	37
Pacific-----	3	3	3	7	10	17	1	40	34
United States	17	15	23	22	24	27	3	51	43

Only 3 percent of all plants reporting manufactured ice cream for sale, with plants in the South Central and North Atlantic regions of most importance.

Fifty-one percent of all plants sold commercial frozen foods. Plants in the North Atlantic and South Atlantic regions led with 64 and 60 percent, compared with only 40 percent in the Pacific region.

Forty-three percent of the plants wholesaled beef and pork processed by packers. This service was most common in plants in the North Central, North Atlantic, and South Central regions, from 42 to 46 percent, and of least importance in the Pacific, Mountain, and South Atlantic regions, 34 to 38 percent.

The relatively high proportion of plants wholesaling meat from packers in the North Atlantic region appears due to the fact that these plants are not near producing areas and few have slaughter facilities.

It seems unusual that plants in the North Central and South Central regions should lead in sales of meat from packers as these plants have a much higher proportion of slaughter facilities and are located close to the source of livestock production.

LOCKER RENTAL AND PROCESSING RATES

Locker rental and processing rates have steadily increased since the first survey of locker plants in 1941. Table 20 shows the average annual locker rental rate and the processing charges for major services as

Table 20. - *Comparative analysis of average locker rental and processing rates, January 1, 1941, 1942, 1943, 1944, 1946, and 1950*

January 1	Average annual locker rental rate	Processing rate per hundred pounds for			
		Cut, wrap, and freeze	Cut, wrap, freeze, and grind	Cure	Smoke
1941-----	\$9.76	\$1.30	-	\$2.59	\$1.39
1942-----	9.86	1.49	\$1.71	2.82	1.41
1943-----	10.13	1.65	1.87	3.15	1.68
1944 ¹ -----	10.48	1.81	2.08	3.18	1.78
1946-----	11.38	2.01	2.37	3.41	2.07
1950-----	12.97	2.87	3.27	3.72	2.14

¹Survey July 1, 1944.

reported in the last six surveys. In the period covered, locker rental rates increased 33 percent, going from \$9.76 to \$12.97, with 80 percent of this increase occurring since 1944. The average rate to cut, wrap, and freeze rose 120 percent, from \$1.30 per 100 pounds in 1941 to \$2.87 in 1950. Rates for cutting, wrapping, freezing, and grinding increased from \$1.71 per 100 pounds in 1942 (the first year this information was obtained) to \$3.27 in 1950, an increase of 91 percent. Curing charges increased from \$2.59 in January 1941 to \$3.72 on January 1, 1950, a gain of 43 percent. Smoking charges increased from \$1.39 in 1941 to \$2.14 in 1950, an increase of 54 percent.

LOCKER RENTAL RATES

Table 21 shows in detail the average annual rental rate per locker and annual rental rate per cubic foot, by States and regions. Locker rental rates averaged \$12.97 per year and ranged from \$9.34 per locker in

Table 21. - *Frozen food locker plants reporting, average annual locker rental rate, and annual rental rate per cubic foot, by States and regions, January 1, 1950*

State and region	Plants reporting	Average annual locker rental rate ¹	Average rental rate per cubic foot ¹
Maine-----	16	\$16.84	\$2.65
New Hampshire-----	22	14.85	2.32
Vermont-----	27	11.47	1.96
Massachusetts-----	24	16.06	2.57
Rhode Island-----	2	17.25	2.68
Connecticut-----	46	17.37	2.88
New York-----	176	15.07	2.49
New Jersey-----	38	15.43	2.58
Pennsylvania-----	178	13.92	2.29
North Atlantic-----	529	14.77	2.43
Ohio-----	247	14.32	2.37
Indiana-----	178	14.60	2.48
Michigan-----	247	14.09	2.31
Wisconsin-----	413	11.06	1.83
Illinois-----	325	13.75	2.33
Minnesota-----	372	11.58	1.87
Iowa-----	432	12.12	2.00
Missouri-----	262	13.53	2.24
North Dakota-----	129	12.05	1.91
South Dakota-----	169	12.31	1.99
Nebraska-----	282	11.76	1.92
Kansas-----	246	12.04	1.94
North Central-----	3,302	12.60	2.07

Table 21. - Frozen food locker plants reporting, average annual locker rental rate, and annual rental rate per cubic foot, by States and regions, January 1, 1950 - Continued

State and region	Plants reporting	Average annual locker rental rate ¹	Average rental rate per cubic foot ¹
Maryland-----	32	\$14.63	\$2.46
Delaware-----	6	14.83	2.38
Virginia-----	53	15.39	2.58
West Virginia-----	21	16.53	2.67
North Carolina-----	63	15.63	2.62
South Carolina-----	33	16.52	2.82
Georgia-----	77	14.94	2.53
Florida-----	23	19.74	3.39
South Atlantic-----	308	15.80	2.66
Kentucky-----	77	14.49	2.38
Tennessee-----	62	13.57	2.22
Alabama-----	32	14.47	2.45
Mississippi-----	36	13.84	2.25
Arkansas-----	64	14.24	2.31
Louisiana-----	23	17.14	2.91
Oklahoma-----	144	12.92	2.10
Texas-----	232	14.38	2.35
South Central-----	670	14.07	2.30
Montana-----	124	12.41	1.98
Idaho-----	84	11.60	1.62
Wyoming-----	51	14.27	2.32
Colorado-----	124	13.40	2.13
Utah-----	91	12.03	1.91
Nevada-----	6	18.25	3.14
New Mexico-----	26	16.83	2.56
Arizona-----	24	20.16	3.14
Mountain-----	530	13.13	2.04
Washington-----	446	9.34	1.11
Oregon-----	270	10.56	1.28
California-----	304	15.28	2.50
Pacific-----	1,020	11.56	1.60
United States-----	6,359	12.97	2.08

¹Average rate based on most usual size locker in each plant reporting.

Washington to \$20.16 in Arizona. In general, the plants located in Washington and Oregon had the lowest rates. Furthermore, many plants in these States have a high proportion of lockers larger than the standard 6 cubic foot size. This makes the difference in rates between these and other States even more significant. Other States with relatively low rental rates were located in the North Central region. The States with the highest rental rates usually were those of recent locker-plant development. Arizona, Florida, Nevada, Connecticut, Rhode Island, and Louisiana reported average rental rates in excess of

\$17 per locker. Other States with high rental rates include Maine, New Mexico, West Virginia, South Carolina, and Massachusetts.

On a cubic-foot basis, rental rates averaged \$2.08 for all plants, ranging from \$1.11 per cubic foot in those located in Washington to \$3.39 in Florida. In general, plants in the Pacific region reported the lowest rates, with those in the Mountain and North Central regions next. The South Atlantic and North Atlantic regions reported the highest rates.

RATES FOR CUTTING, WRAPPING, AND FREEZING

The rates for cutting, wrapping, and freezing (including chilling) averaged \$2.87 per 100 pounds for beef and \$2.85 for pork (table 22). Highest rates were reported in the North and South Atlantic regions, while the North Central and Mountain regions showed the lowest. Rates on January 1, 1950, averaged 85 cents higher than on January 1, 1946.

In the North Atlantic, North Central, South Atlantic, and Pacific regions, pork rates were on the average under the rates charged for beef, while in the South Central and Mountain regions, the pork rate averaged somewhat higher than the beef rate. The most frequent rates charged for cutting, wrapping, and freezing both beef and pork were between 3.0 cents and 3.4 cents per pound (table 23).

Rates for cutting, wrapping, freezing, and grinding on January 1, 1950, averaged \$3.27 per 100 pounds for beef and \$3.28 for pork, compared with \$2.37 in 1946. Highest rates charged for beef were in the North Atlantic and South Atlantic regions, \$4.09 and \$4.24, with lowest in the North Central region at \$2.93. The lowest average rate was found in North Dakota, \$2.61, with the highest in Rhode Island, \$6.00 per 100 pounds.

While rates for cutting, wrapping, freezing, and grinding pork averaged only 1 cent per 100 pounds higher than for beef for the country as a whole, they varied considerably between regions. In the South Central, Mountain, and South Atlantic regions, pork rates averaged above beef rates, while in the other three regions, pork rates averaged below the beef rate. The most usual rates charged for cutting, wrapping, freezing, and grinding beef and pork were from 3.0 to 3.4 cents per pound (table 23).

CURING RATES

Curing rates averaged \$3.72 per 100 pounds, with highest rates in the North Atlantic and Pacific regions, \$4.01 and \$4.42, and the lowest in the North Central and South Central regions, \$3.58 and \$3.69 per 100 pounds (table 22). The most frequent rates charged for this service (44 percent of the plants) were between 3.0 and 3.9 cents per pound, although 50 percent of them charged 4 cents or more and only 6 percent charged less than 3 cents per pound (table 23). Compared with 1946, curing rates increased 31 cents per 100 pounds.

Table 22. - Average processing rates by States and regions, January 1, 1950

State and region	Processing rate per 100 pounds for -					Freezing only fruits and vegetables			
	Cut, wrap, and freeze		Cut, wrap, freeze, and grind		Cure	Smoke	Cents per pound	Cents per pint	Cents per quart
	Beef	Pork	Beef	Pork					
Maine-----	(1)	(1)	\$4.09	\$3.82	\$4.18	\$2.55	2.10	2.00	2.50
New Hampshire-----	\$4.44	\$4.56	4.05	3.95	4.42	2.93	2.08	1.80	3.40
Vermont-----	3.12	2.96	3.68	3.05	3.88	2.23	2.72	2.25	3.25
Massachusetts-----	5.00	4.11	5.00	4.38	4.58	2.65	2.00	1.50	3.00
Rhode Island-----	-	-	6.00	6.00	-	-	2.00	2.50	4.00
Connecticut-----	(1)	(1)	4.58	3.77	4.23	2.87	1.75	2.17	3.10
New York-----	3.73	3.50	4.25	4.12	3.88	2.48	2.15	2.17	3.34
New Jersey-----	(1)	(1)	4.29	4.08	4.08	3.04	1.55	2.09	3.50
Pennsylvania-----	3.21	3.25	3.73	3.65	3.86	2.46	1.84	1.85	3.05
North Atlantic--	3.72	3.54	4.09	3.87	4.01	2.57	2.04	2.02	3.21
Ohio-----	3.03	3.00	3.40	3.39	3.43	2.14	2.09	1.86	2.96
Indiana-----	3.42	3.44	3.55	3.53	3.46	2.06	2.64	2.53	3.94
Michigan-----	3.09	3.05	3.29	3.27	3.48	2.20	2.15	1.91	3.06
Wisconsin-----	2.58	2.55	2.65	2.62	3.36	2.20	1.87	1.99	3.27
Illinois-----	3.01	3.00	3.28	3.22	3.66	2.14	2.98	2.47	3.85
Minnesota-----	2.27	2.25	2.47	2.47	3.53	2.16	2.05	2.26	3.70
Iowa-----	2.44	2.40	2.64	2.61	3.65	2.00	2.30	2.38	3.68
Missouri-----	2.80	2.79	2.96	2.96	3.72	2.02	2.07	1.94	3.16
North Dakota-----	2.30	2.32	2.61	2.64	4.21	2.35	1.00	2.34	4.06
South Dakota-----	2.46	2.46	2.64	2.62	3.60	2.08	1.90	2.46	4.17
Nebraska-----	2.59	2.58	2.76	2.76	3.70	2.15	1.66	2.09	3.49
Kansas-----	2.93	2.93	2.99	3.00	3.44	1.88	1.74	1.78	3.08
North Central--	2.59	2.58	2.93	2.91	3.58	2.11	2.07	2.21	3.57
Maryland-----	(1)	(1)	4.25	4.33	4.61	2.33	1.92	2.33	3.67
Delaware-----	(1)	(1)	4.00	4.00	4.00	2.50	2.00	2.50	3.50
Virginia-----	3.82	3.57	4.57	4.39	4.03	2.42	1.81	2.39	3.58
West Virginia-----	(1)	(1)	4.16	4.12	4.55	2.91	-	1.79	2.94
North Carolina-----	3.28	3.19	3.95	3.87	3.62	2.16	1.50	1.86	3.04
South Carolina-----	(1)	(1)	4.50	4.52	4.08	2.18	2.42	2.20	3.93
Georgia-----	3.46	3.42	4.02	4.31	3.47	2.03	1.92	1.91	3.04
Florida-----	(1)	(1)	4.74	4.84	3.90	2.13	1.75	2.50	4.22
South Atlantic--	3.61	3.51	4.24	4.30	3.75	2.18	1.96	2.06	3.31
Kentucky-----	3.18	3.25	3.51	3.53	4.39	2.12	3.06	2.53	4.50
Tennessee-----	3.07	3.25	3.44	3.47	3.38	2.11	2.35	2.25	3.67
Alabama-----	(1)	(1)	3.62	3.86	3.65	1.69	2.40	2.17	3.33
Mississippi-----	3.90	3.85	4.06	4.10	3.78	1.67	2.36	2.06	3.28
Arkansas-----	3.29	3.21	3.57	3.72	4.10	2.13	2.13	1.99	3.22
Louisiana-----	3.88	3.88	4.55	4.50	4.34	2.53	1.33	1.92	3.08
Oklahoma-----	3.24	3.21	3.22	3.21	3.37	1.81	2.02	2.17	3.58
Texas-----	3.33	3.45	3.65	3.93	3.58	2.03	1.91	2.09	3.35
South Central--	3.36	3.41	3.57	3.71	3.69	1.97	2.24	2.12	3.43
Montana-----	3.03	3.07	3.05	3.09	3.76	2.34	1.47	1.61	2.72
Idaho-----	2.88	2.90	3.31	3.36	3.64	2.12	1.11	1.50	2.42
Wyoming-----	3.22	3.22	3.41	3.52	4.13	2.17	1.30	1.68	2.79
Colorado-----	3.14	3.16	3.27	3.37	3.38	2.03	1.31	1.34	2.38
Utah-----	2.78	2.94	3.09	3.25	4.28	2.12	1.69	1.40	2.47
Nevada-----	-	-	4.25	4.25	3.25	2.50	1.33	-	-
New Mexico-----	3.86	3.86	3.85	3.80	3.94	2.54	2.56	2.39	4.00
Arizona-----	-	-	4.23	4.43	4.08	2.33	1.60	2.00	3.08
Mountain-----	3.06	3.10	3.30	3.38	3.78	2.17	1.41	1.56	2.64
Washington-----	2.91	2.90	3.18	3.17	4.27	2.12	1.11	1.14	2.00
Oregon-----	3.13	3.10	3.35	3.31	4.48	2.52	1.24	1.29	2.30
California-----	3.40	3.38	4.01	4.00	4.46	2.36	1.50	1.60	2.67
Pacific-----	3.17	3.15	3.55	3.53	4.42	2.34	1.39	1.44	2.46
United States--	2.87	2.85	3.27	3.28	3.72	2.14	1.90	2.11	3.42

¹Service not generally offered or sample inadequate.

Table 23. - Percentage of frozen food locker plants charging specified rates for processing services, by regions, January 1, 1950

Service and rate (cents per pound)	Percentage of plants having indicated rate						
	North At- lantic	North Central	South At- lantic	South Central	Moun- tain	Pacific	United States
Cut, wrap, and freeze - Beef:							
Under 2.0-----	0	4	2	2	2	0	3
2.0 - 2.4-----	2	28	7	4	9	10	20
2.5 - 2.9-----	6	27	3	3	17	13	20
3.0 - 3.4-----	35	31	23	50	42	43	35
3.5 - 3.9-----	10	4	16	7	13	11	6
4.0 - 4.4-----	29	5	37	26	15	18	12
4.5 - 4.9-----	1	(1)	5	3	0	2	1
5.0 and over-----	17	1	7	5	2	3	3
Cut, wrap, and freeze - Pork:							
Under 2.0-----	0	4	2	2	2	0	3
2.0 - 2.4-----	4	29	9	3	9	12	21
2.5 - 2.9-----	6	27	2	3	15	12	20
3.0 - 3.4-----	43	32	28	51	44	42	36
3.5 - 3.9-----	12	3	19	8	12	11	6
4.0 - 4.4-----	20	4	26	24	13	18	10
4.5 - 4.9-----	1	0	6	3	1	2	1
5.0 and over-----	14	1	8	6	4	3	3
Cut, wrap, freeze, and grind - Beef:							
Under 2.0-----	1	1	0	(1)	(1)	(1)	1
2.0 - 2.4-----	3	13	0	2	4	4	8
2.5 - 2.9-----	(1)	18	0	2	8	10	12
3.0 - 3.4-----	16	45	13	41	51	35	40
3.5 - 3.9-----	8	8	12	10	12	10	9
4.0 - 4.4-----	40	12	40	35	18	28	21
4.5 - 4.9-----	3	1	6	2	2	2	2
5.0 and over-----	29	2	29	8	5	11	7
Cut, wrap, freeze, and grind - Pork:							
Under 2.0-----	1	1	0	(1)	(1)	(1)	1
2.0 - 2.4-----	4	14	0	2	4	5	9
2.5 - 2.9-----	2	19	0	2	5	9	12
3.0 - 3.4-----	26	45	16	39	50	35	40
3.5 - 3.9-----	11	8	12	8	12	9	9
4.0 - 4.4-----	31	11	33	31	20	27	19
4.5 - 4.9-----	2	(1)	4	3	2	3	1
5.0 and over-----	23	2	35	15	7	12	9
Cure:							
Under 3.0-----	5	7	8	8	3	1	6
3.0 - 3.9-----	35	49	43	45	42	17	44
4.0 - 4.9-----	27	28	32	26	34	29	28
5.0 - 5.9-----	27	13	13	17	18	46	18
6.0 - 6.9-----	4	2	3	3	2	5	3
7.0 and over-----	2	1	1	1	1	2	1
Smoke:							
Under 2.0-----	4	12	21	23	7	4	13
2.0 - 2.9-----	55	70	55	65	79	69	68
3.0 - 3.9-----	30	15	16	9	9	21	15
4.0 - 4.9-----	6	2	7	1	3	4	3
5.0 and over-----	5	1	1	2	2	2	1
Freeze fruits and vegetables:							
Under 2.0-----	22	32	42	21	69	68	38
2.0 - 2.9-----	61	39	37	42	22	29	39
3.0 - 3.9-----	15	25	15	30	8	2	19
4.0 and over-----	2	4	6	7	1	1	4

¹Less than 0.5 percent.

SMOKING RATES

Smoking rates averaged \$2.14 per 100 pounds and were highest in the Pacific Coast and North Atlantic regions, \$2.34 and \$2.57 per 100 pounds. Lowest rates reported were in the South Central and North Central regions, \$1.97 and \$2.11 per 100 pounds (table 22). The most frequent rates charged for this service were between 2.0 and 2.9 cents per pound, with 68 percent of all plants making this charge. Nineteen percent charged 3 cents or more and 13 percent charged under 2 cents per pound (table 23).

FRUITS AND VEGETABLES

The average rates charged for freezing fruits and vegetables by all plants reporting were 1.90 cents per pound, 2.11 cents per pint, and 3.42 cents per quart. Rates were highest in the North Central and South Central regions and lowest in the Pacific and Mountain regions (table 22). Most frequent rates charged for this service were from 2.0 to 2.9 cents per pound, with thirty-nine percent of the plants within this range. Thirty-eight percent charged less than 2 cents and 23 percent charged 3 cents or more per pound (table 23).

RATES AND SIZE OF TOWN

In general, rental and processing rates are higher in larger towns and cities than in smaller communities. However, this does not hold true in all regions (table 24). For the country as a whole, rental rates averaged 12 percent higher for cities over 25,000 than in towns under 1,000 population. In the Pacific and Mountain regions, however, rental rates in cities over 25,000 were lower than those charged in small and medium-sized towns. This situation is partly due to the fact that in numerous large cities in these regions there is a heavy concentration of locker plants and competition has resulted in driving rates down in these centers. The increased operating costs in larger cities, coupled with smaller volume processed per locker may account for some of the difficulties which plants in large towns and cities in these regions have encountered in recent years.

For the country as a whole, the rate to cut, wrap, freeze, and grind averaged 25 percent higher in cities over 25,000 than in towns under 1,000. However, the difference between medium-sized towns and large towns, or cities was much less pronounced, particularly in the Mountain and Pacific regions.

Rates for curing and smoking were about 10 percent higher in towns of 25,000 than in towns under 1,000, but in most regions they were only slightly higher than rates charged in medium-sized towns.

The size of town appeared to have but little effect upon rates charged for freezing fruits and vegetables. In fact, rates charged in large towns were in most cases lower than those charged in small and medium-sized towns.

Table 24. - Average locker rental and processing rates by region and size of town, January 1, 1950

Region and size of town	Average locker rental rate for most usual size locker	Processing rate per 100 pounds for -						Freezing only fruits and vegetables		
		Cut, wrap, and freeze		Cut, wrap, freeze, and grind		Cure	Smoke	Cents per pound	Cents per pint	Cents per quart
		Beef	Pork	Beef	Pork					
1,000 or under-----	\$14.35	\$3.29	\$3.15	\$3.72	\$3.52	\$3.86	\$2.62	2.11	1.83	2.75
1,001 - 2,000-----	14.32	3.34	3.26	3.95	3.71	3.70	2.42	1.94	1.95	3.29
2,001 - 5,000-----	14.81	3.99	3.77	4.12	3.83	3.94	2.57	1.93	2.07	3.21
5,001 - 10,000-----	15.50	3.68	3.61	4.24	4.09	4.07	2.46	2.05	2.05	3.29
10,001 - 25,000-----	14.53	4.17	3.95	4.17	4.07	4.24	2.90	2.22	2.08	3.28
Over 25,000-----	16.04	3.80	3.50	4.28	3.98	4.21	2.29	1.89	2.05	3.36
North Atlantic---	14.77	3.72	3.54	4.09	3.87	4.01	2.57	2.04	2.02	3.21
1,000 or under-----	12.21	2.50	2.48	2.81	2.80	3.56	2.06	2.02	2.21	3.58
1,001 - 2,000-----	12.74	2.60	2.58	3.03	3.03	3.59	2.11	2.12	2.25	3.63
2,001 - 5,000-----	12.82	2.68	2.67	3.08	3.03	3.55	2.14	2.26	2.20	3.58
5,001 - 10,000-----	13.03	2.74	2.70	3.17	3.15	3.45	2.11	1.97	2.18	3.50
10,001 - 25,000-----	13.28	2.83	2.82	3.19	3.19	3.64	2.22	2.18	2.02	3.30
Over 25,000-----	13.79	3.25	3.25	3.47	3.40	3.72	2.30	2.03	2.09	3.21
North Central---	12.60	2.59	2.58	2.93	2.91	3.58	2.11	2.07	2.21	3.57
1,000 or under-----	15.47	3.38	3.21	4.00	4.13	3.75	2.29	1.62	2.31	3.62
1,001 - 2,000-----	15.99	4.02	3.92	4.19	4.35	3.96	2.29	1.96	2.24	3.59
2,001 - 5,000-----	15.45	3.63	3.57	4.24	4.22	3.75	2.21	1.95	1.91	3.12
5,001 - 10,000-----	15.62	3.58	3.50	4.21	4.18	3.78	1.98	2.55	1.94	3.00
10,001 - 25,000-----	15.49	3.50	3.38	4.38	4.35	3.49	2.27	2.14	1.87	3.09
Over 25,000-----	16.95	3.75	3.67	4.48	4.55	4.05	2.34	1.71	2.26	3.60
South Atlantic---	15.80	3.61	3.51	4.24	4.30	3.75	2.18	1.96	2.06	3.31
1,000 or under-----	13.93	3.38	3.42	3.51	3.59	3.70	2.05	2.38	2.21	3.61
1,001 - 2,000-----	13.56	3.24	3.36	3.48	3.58	3.54	1.80	2.15	2.13	3.51
2,001 - 5,000-----	14.14	3.25	3.26	3.60	3.78	3.62	2.00	2.41	2.06	3.32
5,001 - 10,000-----	13.74	3.27	3.37	3.52	3.67	3.84	1.96	2.29	2.10	3.42
10,001 - 25,000-----	14.48	3.56	3.56	3.47	3.63	3.73	1.95	2.08	2.21	3.67
Over 25,000-----	15.17	3.71	3.83	3.71	3.76	4.02	2.27	2.47	2.10	3.31
South Central---	14.07	3.36	3.41	3.57	3.71	3.69	1.97	2.24	2.12	3.43
1,000 or under-----	13.70	3.11	3.16	3.17	3.23	3.65	2.12	1.40	1.56	2.62
1,001 - 2,000-----	13.27	2.80	2.82	3.56	3.66	3.97	2.00	1.39	1.47	2.55
2,001 - 5,000-----	13.73	3.09	3.19	3.23	3.35	3.84	2.26	1.73	1.89	3.19
5,001 - 10,000-----	13.23	3.00	3.04	3.24	3.31	3.68	2.05	1.45	1.42	2.37
10,001 - 25,000-----	13.43	3.44	3.41	3.47	3.56	3.76	2.23	1.47	1.59	2.62
Over 25,000-----	13.17	3.25	3.25	3.39	3.53	3.89	2.39	1.25	1.31	2.36
Mountain-----	13.13	3.06	3.10	3.30	3.38	3.78	2.17	1.41	1.56	2.64
1,000 or under-----	10.51	2.96	2.92	3.25	3.21	4.43	2.17	1.50	1.48	2.44
1,001 - 2,000-----	11.91	3.06	3.06	3.29	3.29	4.41	2.40	1.40	1.38	2.60
2,001 - 5,000-----	11.76	3.25	3.24	3.54	3.53	4.35	2.25	1.35	1.44	2.29
5,001 - 10,000-----	12.44	3.40	3.33	3.63	3.62	4.30	2.43	1.26	1.71	2.76
10,001 - 25,000-----	12.73	3.41	3.41	3.70	3.68	4.33	2.49	1.42	1.35	2.46
Over 25,000-----	11.79	3.15	3.20	3.87	3.86	4.70	2.31	1.51	1.53	2.47
Pacific-----	11.56	3.17	3.15	3.55	3.53	4.42	2.34	1.39	1.44	2.46
1,000 or under-----	12.24	2.63	2.61	2.98	2.97	3.64	2.10	1.93	2.17	3.52
1,001 - 2,000-----	13.07	2.84	2.83	3.28	3.30	3.71	2.12	1.96	2.14	3.49
2,001 - 5,000-----	13.41	3.10	3.06	3.45	3.45	3.72	2.18	2.04	2.09	3.39
5,001 - 10,000-----	13.61	3.15	3.12	3.52	3.53	3.75	2.14	1.93	2.05	3.29
10,001 - 25,000-----	13.66	3.33	3.27	3.56	3.58	3.84	2.31	1.92	1.95	3.23
Over 25,000-----	13.69	3.35	3.34	3.74	3.71	4.00	2.31	1.79	2.01	3.16
United States---	12.97	2.87	2.85	3.27	3.28	3.72	2.14	1.90	2.11	3.42

PRODUCTS PROCESSED PER LOCKER RENTED

The volume of food processed per locker is probably the most significant data reported in the survey. The study showed that an average of 295 pounds of food was processed per locker rented for the year 1949, a decline of 16 percent from 1945. This year's volume per locker rented was the lowest reported for any of the surveys from 1941 to 1945, as shown by table 25. However, the total volume of food processed in all plants was estimated at 1.3 billion pounds, compared with 1.1 billion in the 1946 survey. While only those plants furnishing reasonably complete data on poundage were included in this analysis, it should be kept in mind that the breakdown between commodities frequently depends upon operator's estimates. Also, the averages are based on the number of lockers rented on January 1, 1950. The pounds per locker might be higher if the number of lockers were based on the average rented throughout the year.

Other factors which should be considered are: (1) Fruits and vegetables are often put in the locker without going through plant records, so that the actual poundage of these products is probably higher than that reported. This is particularly true of plants on the Pacific Coast; and (2) the pork chilled includes all pork that went to the curing department, as well as that stored in fresh-frozen form, so the pounds of pork cured are not in addition to the amount chilled and cut.

Table 25. - *Average number of pounds chilled, cut, wrapped, or frozen per locker rented, 1941-49*

Year	Average pounds of products processed each year				
	Beef, veal, pork, and lamb	Poultry	Game	Fruits and vegetables	Total
1941-----	334	14	(1)	12	360
1942-----	324	10	16	32	382
1943-44 ² -----	289	15	9	29	342
1945-----	302	15	12	24	353
1949-----	257	11	9	18	295

¹Included in beef, veal, pork, and lamb.

²Survey July 1, 1944

Table 26 shows the volume of food processed per locker rented, by States and regions, for the year 1949. Of the 295 pounds of food processed per locker, 257 pounds, or 87 percent, consisted of meat; 11 pounds, or 4 percent, of poultry; 9 pounds, or 3 percent, of game; and 18 pounds, or 6 percent, of fruits and vegetables.

The highest volume processed was in the South Atlantic region where an average of 416 pounds per locker was reported, and the lowest volume was in the Pacific region with an average of only 202 pounds per locker. Sixty-three percent of all locker plants processed, on the average, less than 300 pounds per locker and only 21 percent processed over 400 pounds. The Pacific region reported the lowest percentage of plants processing over 300 pounds per locker, 19 percent, while the South Atlantic region showed the highest, 57 percent. In the North Central and South Central regions, approximately 41 percent of the plants processed over 300 pounds per locker (table 27).

Regions showing the greatest declines in average volume compared with 1945 were the North Central with a decrease of 83 pounds and the North Atlantic with a decrease of 61 pounds per locker rented. In contrast to the country as a whole, the South Atlantic region reported an increase of 23 pounds per locker.

The wide variations between States are the result of several factors such as available production, consumer preference, and kind of service offered by locker plants. In areas where locker plants provide a complete service of slaughtering, curing, smoking, and rendering lard the volume of meat, especially pork, handled is usually higher than where such services are absent.

The volume of beef, veal, pork, and lamb processed averaged 257 pounds per locker rented and ranged from 165 pounds in the Pacific region to 350 pounds in the South Atlantic region. Compared with 1945, meat volume declined from an average of 302 pounds for the country as a whole to 257 pounds, a drop of nearly 15 percent (table 26).

The volume of poultry processed averaged 11 pounds per locker rented and varied from 4 pounds in the Pacific region to 32 pounds in the South Atlantic region. Compared with 1945, poultry volume for the country as a whole declined from 15 to 11 pounds per locker, a drop of 27 percent.

The Mountain region reported the highest poundage of game processed, 31 pounds, followed by the Pacific region with 15 pounds per locker. The lowest volume was in the South Atlantic, with 2 pounds, and the North Central region, with 5 pounds per locker. Wyoming reported the largest volume of game, 71 pounds per locker; Arizona, second, with 37 pounds; and Maine, third, with 34 pounds. Average volume for the country as a whole was 9 pounds per locker in 1949, compared with 12 pounds in 1945, a decline of 25 percent.

Fruits and vegetables frozen for locker patrons averaged 18 pounds per locker for the year 1949, compared with 24 pounds in 1945, a drop of 25 percent. One reason for this decline may have been the sharply expanded use of home freezer units which reduced the volume handled through locker plants.

Table 26. - *Average number of pounds chilled, cut, wrapped, or frozen per locker rented for plants processing or having access to meat-processing facilities, by States and regions, 1949*

State and region	Beef, veal, pork, and lamb	Poultry	Game	Fruits and vegetables	Total
Maine-----	207	22	34	42	305
New Hampshire-----	176	26	11	14	227
Vermont-----	202	11	6	27	246
Massachusetts-----	130	21	17	27	195
Rhode Island-----	(1)	(1)	(1)	(1)	(1)
Connecticut-----	173	15	8	18	214
New York-----	229	12	6	19	266
New Jersey-----	170	19	6	17	212
Pennsylvania-----	167	16	7	30	220
North Atlantic---	189	16	8	27	240
Ohio-----	222	10	2	28	262
Indiana-----	248	13	2	21	284
Michigan-----	248	10	13	23	294
Wisconsin-----	278	9	10	12	309
Illinois-----	318	14	2	27	361
Minnesota-----	338	11	10	6	365
Iowa-----	329	11	2	16	358
Missouri-----	201	15	1	17	234
North Dakota-----	295	6	2	2	305
South Dakota-----	277	9	12	6	304
Nebraska-----	244	8	1	16	269
Kansas-----	226	12	2	14	254
North Central---	276	10	5	18	309
Maryland-----	195	34	4	35	268
Delaware-----	138	17	0	39	194
Virginia-----	268	39	2	26	335
West Virginia-----	385	13	4	22	424
North Carolina-----	527	35	2	36	600
South Carolina-----	378	35	2	44	459
Georgia-----	310	33	1	29	373
Florida-----	322	16	2	9	349
South Atlantic---	350	32	2	32	416

Table 26. - Average number of pounds chilled, cut, wrapped, or frozen per locker rented for plants processing or having access to meat-processing facilities, by States and regions, 1949 - Continued

State and region	Beef, veal, pork, and lamb	Poultry	Game	Fruits and vegetables	Total
Kentucky-----	223	18	2	21	264
Tennessee-----	173	17	1	29	220
Alabama-----	434	21	2	20	477
Mississippi-----	422	33	2	47	504
Arkansas-----	259	8	2	35	304
Louisiana-----	419	20	1	12	452
Oklahoma-----	251	12	1	16	280
Texas-----	319	12	13	7	351
South Central----	296	15	6	18	335
Montana-----	199	7	28	6	240
Idaho-----	151	5	21	15	192
Wyoming-----	172	9	71	5	257
Colorado-----	185	8	31	9	233
Utah-----	172	4	32	7	215
Nevada-----	242	1	18	1	262
New Mexico-----	360	11	17	6	394
Arizona-----	293	8	37	5	343
Mountain-----	192	7	31	10	240
Washington-----	114	2	18	7	141
Oregon-----	128	2	15	14	159
California-----	235	7	13	11	266
Pacific-----	165	4	15	18	202
United States----	257	11	9	18	295

¹Data not available.

Table 27. - *Percentage of plants with specified processing volume per locker rented of beef, veal, pork, lamb, poultry, and game, by regions, 1949*

Pounds processed per locker rented	North Atlantic	North Central	South Atlantic	South Central	Mountain	Pacific	United States
Under 100-----	21	9	5	12	21	33	14
100 - 199-----	30	22	18	22	28	30	24
200 - 299-----	27	27	20	25	25	18	25
300 - 399-----	13	19	16	14	12	9	16
400 - 499-----	5	11	13	8	6	4	9
500 - 599-----	2	6	9	7	4	2	5
600 - 699-----	1	3	5	4	1	1	3
700 and over----	1	3	14	8	3	3	4
Total-----	100	100	100	100	100	100	100

VOLUME PROCESSED BY SIZE OF TOWN

Table 28 shows average volume processed per locker rented by size of town. This table indicates that for the country as a whole plants located in towns of 5,000 to 10,000 population processed the largest average volume per locker, 321 pounds, although the difference in volume for towns from 1,000 to 10,000 was not significant. Cities over 25,000 reported the lowest volume, 229 pounds processed per locker, and towns from 10,000 to 25,000 showed the next lowest volume, 273 pounds.

The relationship between volume processed and size of town varied considerably between regions. In the North Central region, plants in towns of less than 1,000 reported the largest volume processed per locker, while in the Mountain region, plants in towns of 2,000 to 5,000 showed the highest average volume and in the Pacific region, plants in towns from 1,000 to 2,000 reported the largest volume processed per locker.

The higher percentage of farm patrons in plants located in small and medium-sized towns accounts in large measure for the heavier average volume processed.

Table 28. - Average number of pounds chilled, cut, wrapped, or frozen per locker rented, by region and size of town, 1949

Region and size of town	Beef, veal, pork, and lamb	Poultry	Game	Fruits and vegetables	Total
North Atlantic					
1,000 or under-----	217	12	4	21	254
1,001 - 2,000-----	172	13	5	43	233
2,001 - 5,000-----	197	17	8	26	248
5,001 - 10,000-----	215	21	10	32	278
10,001 - 25,000-----	141	16	10	22	189
Over 25,000-----	178	12	12	20	222
Average-----	189	16	8	27	240
North Central					
1,000 or under-----	290	10	4	16	320
1,001 - 2,000-----	281	11	4	17	313
2,001 - 5,000-----	273	12	5	22	312
5,001 - 10,000-----	277	13	5	21	316
10,001 - 25,000-----	234	15	9	24	282
Over 25,000-----	187	13	8	20	228
Average-----	276	10	5	18	309
South Atlantic					
1,000 or under-----	268	31	1	28	328
1,001 - 2,000-----	300	25	2	30	357
2,001 - 5,000-----	389	35	2	37	463
5,001 - 10,000-----	410	35	2	38	485
10,001 - 25,000-----	389	30	2	31	452
Over 25,000-----	320	36	2	25	383
Average-----	350	32	2	32	416
South Central					
1,000 or under-----	283	14	4	13	314
1,001 - 2,000-----	296	12	3	23	334
2,001 - 5,000-----	315	14	5	16	350
5,001 - 10,000-----	327	19	4	23	373
10,001 - 25,000-----	274	16	12	16	318
Over 25,000-----	237	18	14	14	283
Average-----	296	15	6	18	335

Table 28. - Average number of pounds chilled, cut, wrapped, or frozen per locker rented, by region and size of town, 1949 - Continued

Region and size of town	Beef, veal, pork, and lamb	Poultry	Game	Fruits and vegetables	Total
Mountain					
1,000 or under-----	197	6	32	8	243
1,001 - 2,000-----	206	7	32	9	254
2,001 - 5,000-----	220	7	35	12	274
5,001 - 10,000-----	216	2	27	8	253
10,001 - 25,000-----	175	11	29	16	231
Over 25,000-----	117	6	31	11	165
Average-----	192	7	31	10	240
Pacific					
1,000 or under-----	154	2	16	14	186
1,001 - 2,000-----	190	5	17	24	236
2,001 - 5,000-----	171	5	16	14	206
5,001 - 10,000-----	179	4	17	16	216
10,001 - 25,000-----	171	5	11	27	214
Over 25,000-----	145	5	13	19	182
Average-----	165	4	15	18	202
United States					
1,000 or under-----	267	9	7	15	298
1,001 - 2,000-----	264	11	7	20	302
2,001 - 5,000-----	268	13	9	20	310
5,001 - 10,000-----	276	15	8	22	321
10,001 - 25,000-----	225	14	11	23	273
Over 25,000-----	186	13	12	18	229
Average-----	257	11	9	18	295

VOLUME OF PORK CURED

The curing of pork is one of the most profitable services performed by locker plants. Volume of pork cured by 2,400 plants reporting this service averaged 55 pounds per locker rented, compared with 65 pounds in 1945 (table 29). The South Atlantic region reported the highest volume

Table 29. - *Frozen food locker plants reporting and pounds of pork cured per locker rented by States and regions, 1949*

State and region	Plants reporting	Average pounds of pork cured per locker rented
Maine-----	7	59
New Hampshire-----	14	56
Vermont-----	8	43
Massachusetts-----	5	32
Rhode Island-----	-	-
Connecticut-----	10	50
New York-----	68	65
New Jersey-----	10	25
Pennsylvania-----	45	49
North Atlantic-----	167	52
Ohio-----	82	42
Indiana-----	70	39
Michigan-----	111	36
Wisconsin-----	144	39
Illinois-----	186	50
Minnesota-----	192	47
Iowa-----	187	35
Missouri-----	85	28
North Dakota-----	44	42
South Dakota-----	63	30
Nebraska-----	90	31
Kansas-----	81	31
North Central-----	1,335	39
Maryland-----	4	49
Delaware-----	1	(1)
Virginia-----	27	90
West Virginia-----	9	196
North Carolina-----	47	258
South Carolina-----	21	207
Georgia-----	43	194
Florida-----	9	134
South Atlantic-----	161	189

Table 29. - *Frozen food locker plants reporting and pounds of pork cured per locker rented by States and regions, 1949 - Continued*

State and region	Plants reporting	Average pounds of pork cured per locker rented
Kentucky-----	34	43
Tennessee-----	21	61
Alabama-----	20	177
Mississippi-----	27	248
Arkansas-----	30	76
Louisiana-----	11	121
Oklahoma-----	60	35
Texas-----	133	71
South Central-----	336	85
Montana-----	22	45
Idaho-----	23	26
Wyoming-----	17	38
Colorado-----	58	33
Utah-----	38	27
Nevada-----	1	(1)
New Mexico-----	9	32
Arizona-----	9	24
Mountain-----	177	33
Washington-----	58	20
Oregon-----	42	27
California-----	124	39
Pacific-----	224	31
United States-----	2,400	55

¹Inadequate data.

at 189 pounds per locker, while the lowest poundage was reported from the Pacific and Mountain regions, with 31 and 33 pounds per locker. North Carolina, with 258 pounds, and South Carolina, with 207 pounds per locker, led all States in volume cured. In spite of the fact that plants in the North Central region are located in the heart of the corn-hog belt, they averaged only 39 pounds per locker, or just slightly more than the Mountain and Pacific regions.

Table 30. - *Percentage of plants with specified curing volume per locker rented in plants with pork-curing facilities, by regions, 1949*

Pounds cured per locker rented	North Atlantic	North Central	South Atlantic	South Central	Mountain	Pacific	United States
1 - 9-----	17	19	2	10	30	31	18
10 - 19-----	13	18	7	11	22	22	17
20 - 29-----	12	17	5	12	14	14	15
30 - 39-----	11	14	2	8	5	10	11
40 - 49-----	9	8	4	8	6	6	7
50 - 59-----	5	7	2	5	6	6	6
60 - 69-----	5	4	4	7	2	2	4
70 - 79-----	4	3	3	3	2	3	3
80 - 89-----	6	2	1	3	3	1	2
90 - 99-----	3	2	5	8	3	1	3
100 - 149-----	9	4	12	9	2	2	5
150 - 199-----	4	1	11	6	2	0	3
200 and over-----	2	1	¹ 42	10	3	2	6

¹Consists of 19 percent from 200 to 299 pounds; 12 percent from 300 to 399 pounds; and 11 percent over 400 pounds per locker rented.

The data presented in table 30 furnishes additional explanation for the low volume of cured products reported by the North Central region. This table shows that 68 percent of North Central plants cured less than 40 pounds per locker. As contrasted to the low curing volume shown by other regions, the South Atlantic region reported 65 percent of the plants with a cured poundage of over 100 pounds per locker and only 16 percent below 40 pounds per locker.

SLAUGHTER VOLUME

Because slaughtering service by locker plants has been greatly expanded in recent years, information was obtained on volume handled during 1949. Of the 1,819 plants reporting slaughter facilities, 1,432 furnished information on volume slaughtered. Volume slaughtered refers to number of head.

The number of animals slaughtered per plant as shown by table 31, averaged 238 head of cattle and calves, 433 hogs, and 12 sheep and lambs, making a total of 683 head. If we assume that 27 percent of the 11,442 locker plants in the United States, or 3,141 plants, operate slaughter facilities and average 683 head per plant, an estimated total volume slaughtered in 1949 by these plants was approximately 2.1 million head of livestock.

The South Central region reported the largest average volume per plant, with 1,026 head of livestock, followed by the Pacific region, with 923 head. Lowest average volume was reported by the North Atlantic region, with 389 head per plant. North Central plants, in spite of the fact that they are located in the heaviest livestock production area of the country, averaged only 594 head per plant, next to the lowest. Due to

Table 31. - *Frozen food locker plants reporting slaughter volume and average volume slaughtered per plant, by species and by regions, 1949*

Region	Plants reporting	Cattle and calves	Hogs	Sheep and lambs	Total
North Atlantic-----	34	112	259	18	389
North Central-----	1,020	172	415	7	594
South Atlantic-----	58	221	627	14	862
South Central-----	212	516	484	26	1,026
Mountain-----	77	227	395	27	649
Pacific-----	31	384	510	29	923
United States---	1,432	238	433	12	683

the fact, however, that 70 percent of all locker-slaughter facilities are located in the North Central region, approximately 62 percent of all livestock was slaughtered in that region. Heaviest average cattle and calf slaughter was reported by the South Central region, with heaviest average hog slaughter in the South Atlantic region.

Seventy-six percent of all plants reporting slaughtered less than 300 head of cattle and calves per plant, while 12 percent slaughtered from 300 to 500 head and 12 percent averaged over 500 head (table 32). Regions reporting highest percentage of plants slaughtering over 300 head of cattle and calves per plant are the South Central, with 55 percent, and the Pacific, with 42 percent. The North Atlantic region reported only 6 percent of the plants with an average slaughter of over 300 head of cattle and calves and the North Central had only 15 percent.

Table 32. - *Percentage of frozen food locker plants with slaughter facilities that reported specified slaughter volume of cattle and calves, by regions, 1949*

Specified slaughter volume	North Atlantic	North Central	South Atlantic	South Central	Mountain	Pacific	United States
None ¹ -----	3	(2)	2	(2)	1	0	(2)
1 - 99-----	59	37	21	11	37	6	32
100 - 199-----	17	32	33	19	21	46	29
200 - 299-----	15	16	20	15	18	6	15
300 - 399-----	0	7	9	13	4	9	8
400 - 499-----	0	3	6	5	5	10	4
500 - 599-----	3	2	3	8	6	6	3
600 - 699-----	3	1	2	6	0	3	2
700 and over--	0	2	4	23	8	14	7

¹Plants slaughtering hogs but no cattle.

²Less than 0.5 percent.

Forty-three percent of all plants reporting slaughtered less than 300 hogs per plant, while 31 percent averaged over 500 hogs and only 8 percent slaughtered over 1,000 head per year (table 33).

The North Atlantic and Pacific regions reported the highest proportion of plants slaughtering less than 300 hogs, 62 percent and 67 percent, while the South Central and South Atlantic showed the lowest percentage of low slaughter volume plants, 38 and 41 percent, respectively.

The highest percentage of plants averaging over 500 hogs each were located in the South Central and South Atlantic regions, 39 and 42 percent, respectively. The lowest percentages, from 18 to 26 percent, were in the North Atlantic, Mountain, and Pacific regions. The North Central region reported 30 percent of plants with average slaughter of more than 500 hogs per year.

Table 33. - *Percentage of frozen food locker plants with slaughter facilities that reported specified slaughter volume of hogs, by regions, 1949*

Specified slaughter volume	North Atlantic	North Central	South Atlantic	South Central	Mountain	Pacific	United States
None ¹ -----	12	(2)	4	2	10	16	2
1 - 99-----	24	8	9	7	7	16	8
100 - 199-----	20	15	16	15	19	12	15
200 - 299-----	6	20	12	14	14	23	18
300 - 399-----	12	16	15	12	12	0	15
400 - 499-----	8	11	2	11	10	7	11
500 - 599-----	3	9	7	12	8	4	9
600 - 699-----	6	7	7	5	4	3	6
700 - 799-----	6	3	4	4	4	6	4
800 - 899-----	0	2	4	4	2	0	2
900 - 999-----	0	2	1	2	0	0	2
1,000 - 1,499--	0	5	8	7	9	3	5
1,500 - 1,999--	3	1	4	3	0	0	2
2,000 and over--	0	1	7	2	1	10	1

¹plants slaughtered cattle but no hogs.

²Less than 0.5 percent.

PROPORTION OF VOLUME SLAUGHTERED FOR LOCKER AND HOME-UNIT PATRONS

As expected, the majority of the livestock slaughtered by locker plants was for patrons. Table 34 indicates that 74 percent of the cattle and calves, 80 percent of the hogs, and 81 percent of the sheep and lambs were slaughtered for locker and home-unit patrons.

The North Central region reported the highest proportion of cattle and calf slaughter for patrons, 80 percent, while the South Central and Pacific regions indicated the lowest, 65 percent. In the case of hog slaughter, the North Central region was also the highest with 84 percent, while the Pacific Coast, at 51 percent, showed the lowest.

In sheep and lamb slaughter, which is of minor importance, the South Atlantic region reported 94 percent for patrons and the Pacific Coast only 36 percent.

It would appear from this analysis that the locker plants in the South and in the Pacific and Mountain regions slaughter a higher percentage of livestock for outside customers or for resale than those in other regions.

It is apparent from this analysis of slaughtering by locker plants that the volume handled by most plants is relatively small, that a high proportion of it is slaughtered for patrons, and, in general, the volume of commercial slaughter has not, as yet, become an important factor in changing established marketing and processing channels. However, the potential capacity of these slaughter plants appears to be much larger than their present volume now indicates. In case of a war emergency they could greatly expand their volume and contribute substantially to the saving of critical transportation, storage, and distribution facilities.

Table 34. - *Frozen food locker plants reporting and percentage of slaughter volume that was slaughtered for locker renters and home-unit patrons, by regions, 1949*

Region	Plants reporting	Cattle and calves	Hogs	Sheep and lambs
North Atlantic-----	30	75	81	85
North Central-----	815	80	84	87
South Atlantic-----	53	75	68	94
South Central-----	189	65	74	82
Mountain-----	59	72	76	74
Pacific-----	26	65	51	36
United States-----	1,172	74	80	81

HOME UNITS AND LOCKER PLANTS

Because of the growing number of home frozen food units and their influence upon locker plant operations, information was obtained on the extent they were used by locker patrons and the extent to which locker plants were processing food for owners of home units. On January 1, 1950, an estimated 2 million home frozen food units were in use.

Table 35. - *Average number of home frozen food unit owners using plant processing or locker facilities, or both, in 5,324 plants that sell frozen food units, rent frozen food units, or do not sell or rent frozen food units, by regions, January 1, 1950*

Region	Average number home frozen food unit owners who are patrons in -				All plants
	Plants selling home units	Plants renting home units	Plants selling and renting home units	Plants neither selling nor renting home units	
North Atlantic----	130	86	159	102	111
North Central-----	105	118	153	64	71
South Atlantic----	129	4	122	95	104
South Central-----	107	34	361	81	89
Mountain-----	63	16	214	59	61
Pacific-----	132	9	118	60	73
United States	110	78	189	68	77

Processing for home-unit owners was most prevalent in the North and South Atlantic regions and of least importance in the Mountain and North Central regions (table 35). This table also shows that plants that sold, rented, or both sold and rented home units, had more home-unit patrons than plants that offered none of these services. For example, plants that sold home units serviced, on the average, 110 home-unit patrons, those that both sold and rented home units serviced 189 home-unit customers, while those that neither sold nor rented home units serviced, on the average, only 68 home-unit patrons per plant.

Table 36 further indicates that 81 percent of all plants neither sold nor rented home units, 17 percent of them sold, and 1 percent rented and 1 percent both sold and rented home units. The North Atlantic and South Atlantic regions reported the highest percentage of locker plants that sold home units, 28 and 26 percent, while the North Central and South Central regions indicated the lowest, 15 and 17 percent.

Table 36. - *Frozen food locker plants and percentage of plants that sell or rent home frozen food units, by States and regions, January 1, 1950¹*

State and region	Estimated number of plants	Sell home frozen food units	Rent home frozen food units	Sell and rent home frozen food units	Do not sell or rent home frozen food units
		Percent	Percent	Percent	Percent
Maine-----	18	31	-	-	69
New Hampshire-----	27	32	5	18	45
Vermont-----	49	21	-	-	79
Massachusetts-----	45	29	4	8	59
Rhode Island-----	6	-	-	-	100
Connecticut-----	60	34	2	2	62
New York-----	245	25	1	-	74
New Jersey-----	60	32	-	5	63
Pennsylvania-----	261	30	1	1	68
North Atlantic---	771	28	1	2	69
Ohio-----	424	26	(2)	2	72
Indiana-----	358	20	-	1	79
Michigan-----	378	21	(2)	2	77
Wisconsin-----	678	13	1	1	85
Illinois-----	594	21	-	2	77
Minnesota-----	679	9	1	(2)	90
Iowa-----	890	13	1	(2)	86
Missouri-----	471	13	-	1	86
North Dakota-----	292	12	1	-	87
South Dakota-----	305	8	-	1	91
Nebraska-----	506	9	(2)	1	90
Kansas-----	496	13	(2)	2	85
North Central---	6,071	15	(2)	1	84
Maryland-----	43	31	-	3	66
Delaware-----	14	29	-	-	71
Virginia-----	76	45	-	6	49
West Virginia-----	22	43	-	-	57
North Carolina-----	106	32	-	1	67
South Carolina-----	56	21	-	-	79
Georgia-----	171	16	1	-	83
Florida-----	52	12	-	-	88
South Atlantic---	540	26	1	1	72

Table 36. - *Frozen food locker plants and percentage of plants that sell or rent home frozen food units, by States and regions, January 1, 1950¹ - Continued*

State and region	Estimated number of plants	Sell home frozen food units	Rent home frozen food units	Sell and rent home frozen food units	Do not sell or rent home frozen food units
		Percent	Percent	Percent	Percent
Kentucky-----	117	20	-	2	78
Tennessee-----	124	12	2	-	86
Alabama-----	83	16	-	-	84
Mississippi-----	94	8	-	-	92
Arkansas-----	116	18	-	3	79
Louisiana-----	46	21	-	4	75
Oklahoma-----	286	15	1	-	84
Texas-----	534	19	1	2	78
South Central-----	1,400	17	1	1	81
Montana-----	228	16	1	-	83
Idaho-----	195	17	-	2	81
Wyoming-----	84	21	-	-	79
Colorado-----	229	18	-	1	81
Utah-----	154	15	1	-	84
Nevada-----	11	17	-	-	83
New Mexico-----	49	22	-	-	78
Arizona-----	34	25	-	13	62
Mountain-----	984	18	(2)	1	81
Washington-----	668	13	(2)	(2)	87
Oregon-----	482	13	1	-	86
California-----	526	30	(2)	2	68
Pacific-----	1,676	18	(2)	1	81
United States-----	11,442	17	1	1	81

¹Based on reports from 6,737 plants.

²Less than 0.5 percent.

NUMBER OF HOME-UNIT OWNERS BY SIZE OF TOWNS

As might be expected the number of home-unit patrons serviced by locker plants varied in proportion to the size of town in which the plants were located. Table 37 indicates that the number of home-unit patrons serviced per locker plant increased from an average of 40 in towns under 1,000 population to 151 in cities over 25,000.

Table 37. - *Average number of home-unit owners using plant processing or locker facilities or both,¹ by region and size of town, January 1, 1950*

Size of town	North Atlantic	North Central	South Atlantic	South Central	Mountain	Pacific	United States
1,000 or under-----	84	40	72	42	27	33	40
1,001 - 2,000-----	68	75	95	48	50	45	66
2,001 - 5,000-----	120	92	77	71	80	80	86
5,001 - 10,000-----	125	122	124	96	78	105	111
10,001 - 25,000-----	120	133	113	137	120	113	125
Over 25,000-----	155	165	164	224	98	114	151
Average-----	111	71	104	89	61	73	77

¹Based on reports from 5,324 plants.

The survey also showed that an average of 38 locker patrons per plant, or 11 percent of the patrons renting lockers, were owners of home units (table 38). This proportion varied from 9 percent in the Mountain region to 17 percent in the North Atlantic region. This table also shows

Table 38. - *Average number of locker patrons owning home frozen food units, percentage of all locker patrons owning home frozen food units, and average number of home-unit owners not renting lockers, who use plant processing facilities, by regions, January 1, 1950*

Region	Average number of locker patrons owning home frozen food units	Percentage of locker patrons owning home frozen food units	Average number home-unit owners not renting but using plant facilities
North Atlantic-----	59	17	52
North Central-----	33	11	38
South Atlantic-----	53	14	51
South Central-----	44	12	45
Mountain-----	33	9	28
Pacific-----	40	11	33
United States-----	38	11	39

that, in addition to the average of 38 locker patrons per plant who owned home units, an average of 39 home-unit owners who did not rent lockers used plant processing services. In other words, on the average, 77 home-unit owners were served by each locker plant reporting, one-half of whom did not rent lockers. If all locker plants in the United States served, on the average, 77 home-unit users, approximately 880,000 home-unit owners are using locker plant processing services.

VOLUME OF MEAT PROCESSED FOR NON-LOCKER RENTING HOME-UNIT OWNERS

Of the meat processed by locker plants reporting, 14 percent was processed for home-unit owners who did not rent lockers (table 39). If this same percentage of meat was processed by all plants in the United States in 1949, approximately 144 million pounds was processed for home-unit owners who did not rent lockers.

Table 39. - *Percentage of total volume of beef, veal, pork, and lamb processed for patrons who do not rent lockers but own home frozen food units, by regions, 1949*

Region	Plants reporting	Percentage processed for home unit owners not renting lockers
North Atlantic-----	258	17
North Central-----	1,997	12
South Atlantic-----	184	18
South Central-----	437	17
Mountain-----	336	11
Pacific-----	421	17
United States-----	3,633	14

FUTURE TRENDS AND POSSIBILITIES

Information presented in this report indicates the condition of the locker industry at the beginning of 1950. During World War II and post-war years up to 1948, the industry enjoyed a period of rapid expansion, capacity demand, and operated in a seller's market. From 1948 to 1950, the picture changed and locker plants entered a less favorable operating period in which increasing operating costs, lowered demand for services, and keener competition resulted in reduced earnings. As a result of these unfavorable factors, the findings of this survey probably reflect the lowest period of activity since 1942. This condition changed following the outbreak of the Korean conflict. By the close of 1950, locker plants apparently were again operating at a high level of activity.

The locker plant industry in the present defense emergency, resulting in shortages of labor, critical materials, and transportation. is in a unique position to alleviate some of the strains on our over-all economy by:

1. Processing and storing home-grown perishable foods during periods of flush production for local consumption and distribution, thus effecting savings in handling, processing, and transporting these products from source of production to terminal processing centers and then back to local communities.
2. Using available small-town labor in local processing plants.
3. Saving critical materials such as tin, aluminum, and steel in the packaging of foods through the use of paper and other less critical materials.
4. Acting as storage and distributing agents for wholesale distributors of commercial frozen food, locker plants could substantially reduce the frequency of long-haul deliveries to retailers in local communities, and thus further conserve transportation and labor.
5. Reducing food costs to consumers through the processing and merchandising of home-grown foods in local areas.

In an all-out emergency, with possible disruption of transportation and large-scale processing facilities, the 11,600 locker plants, widely dispersed throughout the country, could service the needs of many small towns and communities, and thus relieve the pressure on large commercial plants and transportation agencies. The industry could, if required, process, freeze, and store substantially more than it did in 1949, and, in addition, could process for local consumption in fresh form several times its present volume.

To effectuate such a program calls for a well-laid-out plan of action on the part of locker operators. Such a program should include improvements in processing techniques, more efficient use of labor, plant equipment, and facilities, more stringent sanitary regulations, more efficient use of by-products, honest dealing, and a willingness to provide satisfactory services at reasonable rates and charges.

The present defense emergency offers both a challenge and an opportunity to the locker industry. The manner in which locker operators serve the public during this period may largely determine the industry's future.

Other Publications Available

Agricultural Cooperation in the United States, Bulletin 54, Ward W. Fetrow and R. H. Elsworth.

Legal Phases of Cooperative Associations, Bulletin 50, L. S. Hulbert.

Story of Farmers' Cooperatives, Circular E-23, R. H. Elsworth.

Cooperative Frozen-Food Locker Plants, Circular C-127, S. T. Warrington and Paul C. Wilkins.

Cooperative Frozen-Food Locker Associations, Miscellaneous Report 116, L. B. Mann and Paul C. Wilkins.

Processing by Frozen Food Locker Cooperatives, Miscellaneous Report 129, L. B. Mann, R. L. Fox, and P. C. Wilkins.

Frozen Food Locker Cooperatives in Illinois, Miscellaneous Report 148, L. B. Mann and Paul C. Wilkins.

Organizing a Refrigerated Food Locker Association, Miscellaneous Report 20, L. B. Mann.

Copies of these publications may be obtained upon request, while a supply is available, from the

Director of Information and Extension

Farm Credit Administration
U. S. Department of Agriculture
Washington 25, D. C.